

UC-NRLF



B 4 192 758







A BRIEF HISTORY *of* PRINTING IN ENGLAND

A SHORT HISTORY OF PRINTING
IN ENGLAND FROM CAXTON
TO THE PRESENT TIME

BY
FREDERICK W. HAMILTON, LL.D.

EDUCATIONAL DIRECTOR
UNITED TYPOTHETÆ OF AMERICA



PUBLISHED BY THE COMMITTEE ON EDUCATION
UNITED TYPOTHETÆ OF AMERICA

1918

H3

Library
H3

TO THE
AMERICAN

COPYRIGHT, 1918
UNITED TYPOTHETAE OF AMERICA
CHICAGO, ILL.

Composition and electrotypes contributed by
J. R. LIPPINCOTT COMPANY
Philadelphia

PREFACE

THE treatment of the material used in this volume will be found somewhat different from that adopted in the two preceding. The narrower field of inquiry makes possible a closer following of the ordinary chronological method of arrangement rather than the topical method of the other volumes. An attempt is made to trace the history of printing in England through the centuries from Caxton to Morris and to include some insight into legal regulations, trade conditions, and industrial development generally. As before, it is to be remembered that this is a primer, a book of introductions. No attempt, therefore, is made to go far into details or to discuss disputed points or to include any considerable amount of technical detail. It is hoped that the reader will get a comprehensive view of the subject, will feel its human interest, and will catch some glimpse of its larger relation to the general history of the time.

The writer has consulted a considerable range of authorities, a few of the more accessible of which are cited in the short list of books for supplementary reading. Mention should be made of the very excellent study of John Baskerville, privately printed by Col. Josiah H. Benton, of Boston. This book may perhaps be found in the larger public libraries. Here, as always, it is to be regretted that although much has been written on the subject of printing and of the history of printing a good general history of the subject is still greatly to be desired.

CONTENTS

| | CHAPTER I | PAGE |
|---|-------------|------|
| THE ENGLISH PIONEERS | | 7 |
| | CHAPTER II | |
| THE REGULATION OF THE INDUSTRY AND THE COMPANY OF STATIONERS | | 18 |
| | CHAPTER III | |
| JOHN DAY AND THE DARK AGES OF ENGLISH PRINTING . . . | | 34 |
| | CHAPTER IV | |
| THE EIGHTEENTH CENTURY: THE PERIOD OF TRANSITION . . | | 49 |
| | CHAPTER V | |
| THE WHITTINGHAMS AND THE MODERN BOOK | | 68 |
| SUPPLEMENTARY READING | | 76 |
| REVIEW QUESTIONS | | 77 |

PRINTING IN ENGLAND

CHAPTER I

THE ENGLISH PIONEERS

ENGLAND was slow to take up printing and slow and backward in the development of it. It was 25 years after the invention of printing before any printing was done in England. It was many years after that before the work of the English printers could compare with that done on the continent. The reason for this is to be found in the conditions of the country itself. Although the two great universities had long been in existence, Oxford dating back to 1167 and Cambridge to 1209, England as a whole was a backward country. In culture and the refinements of civilization, as well as in many more practical things, England was not so far advanced as the rest of Europe nor was it to be so for many years to come.

England at this time was an agricultural and grazing country. A colony of Flemings had been brought over to start the cloth industry. There was still, nevertheless, a large export of wool to Flanders, which was there woven and sent back as cloth. The English nobles lived largely on their estates, looking after their tenants, hunting for diversion, and doing a little fighting occasionally when life became otherwise unbearably uninteresting. They were not an educated class and the peasantry were profoundly ignorant. The cities which, as always, depended upon manufacture and commerce were just beginning to grow, with the exception

of some of the seaport towns which were already prosperous and wealthy.

Not only was this general condition true, but there were special conditions which rendered the middle of the fifteenth century unfavorable to culture and to the introduction of a new invention auxiliary to culture. In 1450 England was shaken and horrified by the bloody insurrection of peasants, with its attendant outrages, known as Jack Cade's Revolt. Scarcely had order been restored when a disputed succession to the crown plunged the country into the bloody civil war between the adherents of the Houses of York and Lancaster, known as the Wars of the Roses. This period of civil strife lasted for thirty years and affected the general welfare of England very seriously. It was especially marked by mortality among the noblest families in the realm, many of which were actually exterminated.

Some time within this bloody half-century the art of printing was introduced into England. There is in existence a book printed in Oxford and dated on the title page 1468. Upon the existence of this book, and upon a somewhat doubtful legend, has been built a claim that English printing originated in Oxford. This claim, however, has practically ceased to be maintained. The legend appears to be baseless, and it has been generally concluded that the date is a misprint and that it should be 1478, an X having been dropped in writing the Roman date, a not uncommon error in publications of this period. Historians have now generally agreed that the introduction of printing in England is due to William Caxton, one of the most interesting figures in the whole annals of printing.

Caxton was born in the Weald, or wooded land, of

Kent, a place of simple people and uncouth speech, about 1421. As a boy he was apprenticed to Robert Large, a prominent mercer or silk merchant of London. On the death of Large, not many years later, Caxton went to Bruges, in Belgium, then part of the territory of the Dukes of Burgundy, and became connected with the so-called English "Nation" or "House." This was a chartered company of merchant adventurers similar to the companies which later settled certain portions of North America and to the famous East India Company. Caxton appears to have been successful in business and became Governor of the English "Nation" in 1462.

Bruges was at this time a city of wealth and culture, the Flemings being far in advance of the English in this respect. Life in these surroundings caused Caxton to become interested in reading and good literature, and in 1467 he undertook a translation into English of a collection of stories of Troy, or as he called it "Recuyell of the Historyes of Troye." Shortly after this, Margaret, sister of Edward IV of England, married the Duke of Burgundy and came to Bruges to live. Caxton immediately came into friendly relations with the Duchess, who shortly after gave him a position in her personal service. It is not quite clear what this position was. It has been supposed by some that the purpose of the Duchess was to enable Caxton to pursue his literary labors with the special end of making continental literature known to the English through translation. A more probable supposition, however, is that he was the confidential business adviser to the Duchess. It is a well-known fact that royal personages at this period engaged freely in trade and that sometimes they engaged in extensive commercial transactions with other

royal personages although trade between their two countries might be strictly prohibited by law, as was the case with England and Flanders during part of the reign of Edward IV. At an early period of their friendship Caxton showed the Duchess Margaret his unfinished translation of the Troy stories. Fortunately for the world, the Duchess was a friendly but candid critic. She saw both the strength and the weakness of Caxton's work, and while she took him to task roundly for his rough and poor English she encouraged and commanded him to complete his translation and at the same time improve himself in English. Caxton thereupon renewed his work and completed the translation of the Troy stories at Cologne in 1471.

Caxton was immediately besieged with demands for copies of his translations, which, of course, he was unable to furnish, although he appears to have worked at it until time, strength, and eyesight failed. He thereupon determined to learn the new art of printing so that he might by that means multiply copies of this and other works which he might execute. Unquestionably he saw printing presses in operation in Cologne. It has been claimed that he learned to print there, and this claim receives some support from an ambiguous statement attributed to him many years later by Wynkyn de Worde. It is possible that Caxton may have worked a little in one of the Cologne printing offices, but it seems clear on internal evidence that Mr. Blades is right in his conclusion that Caxton did not learn the art there. The early printed work of Caxton is by no means equal to that of the Cologne printers, and represents an earlier stage of development than that which had been reached by Cologne at this period. Many of the compositor's

methods which were familiar to the Cologne printers of 1470 did not appear in Caxton's books until years later.

On Caxton's return from Cologne he associated himself with one Colard Mansion, who for a few years unsuccessfully attempted to carry on a printing business at Bruges. The probability is that Caxton learned the art during this association with Mansion. The association was terminated in 1476 by the bankruptcy of Mansion. During this period, however, Caxton and Mansion published five books, two in English and three in French. The first to be published, and the first book to be printed in English anywhere, was the translation of the Troy stories. One of the other books was the first book that was ever printed in French. It is interesting to note that the first book to be printed in French was done by an Englishman in Flanders.

In 1476 Caxton withdrew entirely from his business connections in Bruges, went to England, taking with him his presses, type, and workmen, and opened a printing office within the precincts of Westminster Abbey. It has often been stated that Caxton's printing office was in the abbey building itself, but this is undoubtedly an error. English abbeys and cathedrals are commonly surrounded by a considerable extent of ground called a "close." Within this "close" are dwelling houses and not infrequently shops. The entire property belongs to and is controlled by the abbey or cathedral authorities. Caxton's shop appears to have been in a building known as the "Red Pale" within the abbey "close." Caxton continued to print here until his death in 1491.

Within this period he printed ninety-three books and perhaps eight or ten more whose attribution is

uncertain. Of these ninety-three, fifteen ran to two editions and three of the fifteen ran to three editions. Caxton was a good business man and was probably possessed of considerable capital when he began. He not only made the business pay, but took advantage of his somewhat independent position financially to lead and create the popular taste instead of following it. Caxton was thoroughly English. He knew his people and knew what they would take and he printed accordingly. He did a good business in service books, school books, and statutes or public printing. These were what we should call to-day "pot boilers" and kept his office going on a sound business basis. Beyond that he printed a large number of works of good literature, but he took no unnecessary chances even in this field. He always endeavored either to get the financial backing of some wealthy noble or to assure himself of a reasonable sale before he undertook a new publication.

In the field of literature his work was different from that of almost any other printer of his time. He printed no Bibles. Latin Bibles could easily be imported from the continent, probably cheaper than he could print them. English Bibles were not permitted to be printed unless the English translation had been made before the appearance of Wickliffe's Bible in 1380. There were translations into English before Wickliffe, as well as a considerable number of later date, but with the loose and uncertain dating of manuscripts the printing of an English Bible was altogether a more risky proposition than Caxton cared to undertake. He printed no works on theology. There was no demand for theology in English, and theology in Latin and Greek could be cheaply imported. Moreover, although Caxton was a

profoundly religious man and a perfectly loyal son of the Church, he appears to have had no personal interest in theology whatever. For similar reasons he printed no edition of the Fathers and only two volumes of the classics. He left all of these matters to the importers.

His field of publication was the putting before the public of good, recent literature in the English language. He did this partly through printing the works of Chaucer, Langland, and other good English authors and partly through translation of works in French and Latin. He was very much interested in English history and works relating to England, publishing several of the old chronicles and other matters of this sort. He believed that there was great help to be found in reading stories of good women and brave men and he attempted to lay a store of such stories before his readers. His own translations cover over five thousand closely printed folio pages, but he had many other translations made for him. He was a good linguist in French, Flemish, and Latin and a tireless worker at his literary and business labors. He meant that everything which he printed should be helpful to his readers and should make for the betterment of the life of his time, although he would have been the first to disclaim the title of reformer or missionary.

Two notable instances of his literary honesty appear. After the publication of his first edition of Chaucer, an acquaintance came to him and called his attention to the fact that he had followed a very imperfect manuscript. His friend said that his father had a very fine manuscript and Caxton at once arranged for a loan of it. Finding that through following an imperfect text he had omitted many things from Chaucer's text and

inserted many others which did not belong there, he at once printed a correct edition, probably at very serious loss to himself. The unsold copies of the first edition became useless and the cost of a second edition was equal to the first, as the work had to be entirely done over again from the beginning. The other instance must be judged by the standards of his time rather than ours, but showed his desire to present only correct texts to his readers. Caxton published in 1483 a translation of John Mink's "*Liber Festivalis*." An independent translation was published at Oxford in 1487. A few years later Caxton published a second edition, but followed the Oxford text rather than his own earlier translation.

Personally Caxton is a most interesting figure, a sturdy, honest, high-minded, common-sensible English gentleman, a man who loved and served God, honored the King, and helped his neighbor to the best of his ability, and who did his country an inestimable service not only by the introduction of a new art but by the opening of a new field of literature.

Caxton's printing was not remarkable for typographical excellence. He used soft type and thin ink, very much to the detriment of the beauty of his impressions. The first type which he used was a font of black letter made in imitation of the handwriting of the Burgundian clerks of the time. This font had belonged to Mansion and was probably obtained by Caxton from Mansion's creditors. Later he cut for himself several other fonts, some authorities say five, some seven. All of his fonts were black-letter Gothic and all more or less related to the Burgundian script with which he began. He used / instead of commas

and periods. He had a habit of correcting typographical errors by hand after the books were finished. He went over the first copy, making the corrections himself, and afterward the other copies were made to conform by clerks or apprentices.

While Caxton was at work a few other printers made their appearance in England. Some time before 1478 Theodoric Rood, of Cologne, opened a printing office at Oxford. The office was open for about eight years, but seems to have done only a small business. We have fifteen books which are known to have come from this press. They were printed from three different fonts of type. Two of them were good letters imported from Cologne. About 1487 Rood disappeared and is supposed to have gone back to Cologne. In 1479 a press was started at the abbey of St. Albans. This press published eight books that we know of, all for church use or the direct use of the abbey. These books were printed from four fonts of type, two of which are identical with two of Caxton's. It is possible that this was a side enterprise of Caxton's, although it is equally possible that the abbey may have bought the type of Caxton or obtained the use of his matrices or even hired some type of him. The conclusions based on apparent identity of type-faces are always doubtful, as this identity may be accounted for in a considerable number of ways.

In 1480 a printer appeared in London named John Lettou. Lettou was evidently not an Englishman, but his origin is unknown. The word Lettou is an old form of Lithuania. Attempts have been made to identify him with certain continental printers, but as these attempts rest on similarities of type-face they are uncertain. Soon after his appearance Lettou was asso-

ciated with William Machlinia or de Machlinia (William of Mechlin or Malines in Belgium). Machlinia made a specialty of law books. The business was later taken over by Richard Pynson. None of these made any particular contribution to typography. Their interest lies chiefly in the fact that they were the beginners of English printing.

There was no successor to carry on Caxton's traditions of scholarship, of literary taste, or even of craftsmanship. Caxton, as we have said, was a successful business man before he became a printer and was doubtless financially independent during the whole of his later life. His successors were men who were dependent entirely upon their craft for their livelihood. Caxton's immediate successors were two, Wynkyn de Worde, a native of Lorraine, and Richard Pynson, a native of Normandy. Both of these men appear to have learned their trade with Caxton. Wynkyn de Worde carried on the business after Caxton's death. De Worde appears to have been a man of very little education. Pynson was a graduate of the University of Paris, but he never became at home in the English language.

De Worde carried on the Caxton business from 1491 to 1534, at first in Caxton's own shop, afterward in London (Westminster and London have now grown together, but at that time they were a considerable distance apart). During this time De Worde published over six hundred books. His books were cheap and poor in every way. De Worde was slow to start publishing. He published almost nothing for a couple of years after Caxton's death. He appears to have lacked initiative and probably lacked capital. He seems to have discovered that there was money in cheap publications of

a sort that catered to the popular taste, and he diligently worked that line of business. He appears to have made money, but cannot be credited with any higher type of success. He hired translators and editors and he evidently hired cheap ones, as the editorial work on his books is not good.

Pynson printed from 1492 to 1529. He did a much higher class of work than De Worde, although he is by no means eminent for his typography. He made less money than De Worde, but appears to have kept out of financial difficulties. His publications were mostly law books. He took over the business of Lettou and Machlinia, but had specialized in law books on becoming printer to the king in 1510. Pynson introduced the use of roman type in 1509, although it was some time before it displaced the gothic in common use. In 1523 to 1525 he printed Lord Berners's translation of the "Chronicle" of Froissart. In literature this is a notable event. Froissart was really the first modern historian. The book marks the transition from the dry chronicles of the Middle Ages to history proper.

Robert Copeland, who began to print about 1514, is notable as being probably the first English printer, that is to say, the first native-born Englishman to go into the business.

One of the few good printers of this early period was Thomas Berthelet or Bartlett. Berthelet was a Welshman and was an excellent bookbinder as well as a good printer. He was the first man in England to use gold tooling on his binding. Berthelet enjoyed the position of royal printer. Richard Grafton and Edward Whitchurch were the first printers of English Bibles, which began to appear about the middle of the sixteenth century.

CHAPTER II

THE REGULATION OF THE INDUSTRY AND THE COMPANY OF STATIONERS

THE middle of the sixteenth century marks a distinct change in English printing. Up to this time the industry in England had been neither organized, regulated, nor censored. It had been conducted under conditions of freedom almost identical with those which exist to-day, a state of things entirely anomalous in that period. The quality of English printing in this period was generally very poor. In spite, however, of the poor workmanship, there lingers something of the old craftsman spirit. Although the books show glaring imperfections, they also show a certain dignity and harmony which is reminiscent of the spirit of the old craftsmen. In detail, however, the work was poor both in composition and presswork. It showed an almost entire lack of originality. Types, wood-cuts, initials, ornaments, and even the printer's devices were not only bought from the continent of Europe but bought second-hand and used long after signs of wear had become painfully evident. Wood-cuts especially were not only over-used but misused. They were not infrequently inserted with absolute disregard of the text. The printers not only stuck in pictures which had no bearing whatever upon the subject matter, but they used the same picture more than once in the same book.

The reason for this is to be found in the fact that the proprietors of the large shops were intent on profit

and the proprietors of the small shops had no capital. The experience of Wynkyn de Worde had shown that the way to make money was by printing popular books which could be sold cheap, and his successors learned the lesson only too rapidly. There was no effective demand for good printing. The smaller printers had to buy such materials as they could afford and compete as best they could.

From about 1525, which will be recalled as the date of the publication of Froissart's "Chronicle," there was a change in the demand for books. The revival of learning was beginning to make itself felt in England. The influence of Erasmus on the intellectual life of the age was very great. This influence was especially felt in England because Erasmus had himself spent considerable time there and was a friend of John Colet, Dean of St. Paul's, who was not only an influential clergyman but a very great scholar. England was also beginning to feel the stirrings of philosophical and religious discussion. There was a great demand for educational books to meet the needs of the scholars and there began to be a great output of controversial literature. Wynkyn de Worde sometimes printed three or four editions of the same Latin grammar in one year, so great was the demand for educational books.

Up to the middle of the century, however, very little original work was printed in England, or at any rate is now extant. The popular demand was for reprints of old books and for translations of French poems and romances. The classics and other works of more serious literature were commonly imported. There was also a considerable amount of printing for the English

trade done on the continent. Not content with furnishing the English with books in Greek and Latin and the modern languages, some of the continental printers did a flourishing trade in the printing of books in English. Their work was generally better and cheaper than that of the English printers.

As has already been said, English printing was left very much alone up to 1557 excepting that privileges were granted by the crown rather freely. Beginning with the privileges to print statutes and law books, the practice spread until by the middle of the sixteenth century practically all profitable printing was covered by privilege.

During this period, and indeed for several centuries later, the industry was free from labor troubles. The reason, however, is to be found in the peculiar situation which existed under English law. Under English common law all combinations of workmen were considered as contrary to public policy, regarded as combinations in restraint of trade, and dealt with very harshly. A single workman might work or refuse to work for whatever pay or under whatever conditions he pleased, but an agreement of two or more on this basis, that is to combine for pay, hours, and the like, was a criminal conspiracy. Not only were any agreements such a group of men might make absolutely void, but the very fact of entering such a combination was itself a criminal offence. From the reign of Edward I (1272-1307) to George IV (1820-1830) thirty or forty acts of Parliament, commonly called "Statutes of Laborers," were passed on this basis. The reenactment of legislation on this subject from time to time was not caused, as is usual in such cases, by the inef-

fectiveness of the legislation but by the necessity of meeting special conditions which were created by visitations of the plague, wars, and other events having far-reaching industrial effects.

The development of the factory system of production, beginning about the middle of the eighteenth century, with the consequent gathering of great groups of workmen in certain localities and the rapid increase in the town population, rendered a continuance of the old regulations more and more difficult. The laws against combinations of workmen were evaded by the organization of secret societies, while the displacement of large numbers of hand workers by the introduction of machinery caused serious labor troubles and rioting. Other conditions too familiar to need description arose which caused friction between the workmen and their employers. Attempts were made at first to put a stop to the combinations of the workmen by more and more stringent legislation. This proving unsuccessful, the legislation was modified in the direction of leniency. Gradually the unions won their way to recognition, although this recognition was developed in the slow and inconsistent way which is common with English legislation.

In 1875 the whole matter was put on a new basis by the legal acceptance of the principle that it is lawful for any combination of men to do any act which it would be lawful for either of them to do singly. This, of course, was a reversal of the fundamental principle of more than six hundred years of labor legislation, that it was not lawful for a combination of men to do things which any one of them might lawfully do. Since that time the unions have rapidly won their way to full

recognition and to great importance in the industry. In England to-day practically all trades are very thoroughly unionized. The printing industry is no exception. Union membership is much more universal among the workmen in the industry than it is in the United States. This development of organization among the workmen has been accompanied by a development of strong organizations of employers in all industries. To-day practically all industrial bargaining in England is collective bargaining carried on between associated employers and associated employees.

The same difficulties arising out of lack of regulation which had vexed the industry on the continent had made themselves felt in England, but with their usual good sense the English attacked the problem at a very early period. Nearly sixty years before the organization of the Community of Printers in France, in 1618, the English had put printing in line with the other industries by the organization of the Stationers' Company in 1557, the last year of Queen Mary I.

The organization of the Stationers was by no means an innovation. It was rather the legalizing and regularizing of a condition which had risen under the familiar conditions of English industry. As early as 1403 we find the guild or fraternity of scriveners. This guild or fraternity developed into the "Craft" of stationers, influential in fixing and controlling trade customs. The growth of the craft or trade guilds in England was not unlike that of similar organizations in Europe. Their control of the situation, however, seems to have been even more close than elsewhere. An ordinance of Edward II (1307-1327) compelled every citizen of a town to be a member of some craft or mystery.

In 1375 the election of the city officials of London was turned over to the craft guilds or, as they were termed, liveried companies. The liveried companies were so called because each had a distinctive dress which was worn on formal occasions. From this time on the liveried companies controlled the political and municipal power of London for several centuries, electing the Lord Mayor and Aldermen, controlling the train-bands, or city militia, and to a great extent holding the defence of the kingdom in their hands. About seventy-six of these companies still continue to exist. They survive mainly for charitable and philanthropic purposes, conserving and administering the large funds which were accumulated in early centuries.

The Stationers' Company was organized in 1557 partly because the printers saw the necessity for organization and regulation of the industry, and partly because the crown desired a better means for controlling printing than had theretofore existed. It will be remembered that this was in the midst of the age of religious controversy. King Henry VIII had attempted to set himself up as the head of a national church which was not Protestant and at the same time did not acknowledge allegiance to the Pope. King Henry executed with great impartiality both those who defended the ecclesiastical supremacy of the Pope and those who professed Protestant opinions. His successor, King Edward VI, was a Protestant and attempted to make England Protestant. His short reign was followed by that of Mary I, who was a Catholic and attempted to make England Catholic. Her comparatively short reign was followed by the long reign of Elizabeth, in whose time Protestantism became the established

state church of England. It will be remembered that it was near the close of Mary's reign that the Stationers' Company was chartered, and the interest of the crown in securing a better control of the printing press and its output is obvious. In 1560, the second year of Elizabeth, the incorporation of the Stationers' Company was rendered complete by the enrolment of the new company in the list of the liveried companies of London, and we shall presently see that the royal hand was laid heavily upon the printers and their work.

The Stationers' Company was organized in the usual form, with its administration in the hands of a Master and two Wardens. The terms of the charter gave the company authority to govern the trade and to enforce its regulations by the exercise of the right of visitation and disciplinary control over its members. This extended not only to the enforcement of the regulations of the Company but also to the enforcement of royal proclamations and injunctions, and decrees of the Star Chamber.

The Star Chamber, frequently mentioned in English history in general, as well as in the history of English printing, was a special court of high officials. The powers and jurisdiction of this court were somewhat vague and undefined. Theoretically it was intended to deal with matters which could not be adequately dealt with by the regular courts because of the necessity of immediate action, the important nature of the case, or other conditions which made the action of the ordinary courts too slow or not sufficiently effective. Naturally the existence of such a court opened the way to serious abuses, and alleged abuses of its authority played a very large part in the Revolution by which

King Charles I lost his head. As a result of these revolutionary movements, the court was discontinued in 1641, after an existence of at least three hundred years. It is supposed to have derived its name from the fact that the ceiling of the room it sat in in early times was decorated with stars.

After the organization of the Stationers' Company the exercise of the trade was limited to its members. The Company was required to keep registers giving the names of the Masters and Wardens, of all the members of the Company and their apprentices, and of all who "took up freedom," that is to say, became members of the Company from time to time. All books printed were required to be registered with the Company and a copy deposited in the archives accompanied by a fee. This was the beginning of copyright. It was understood that the members of the Company should respect each others' rights to publications thus registered, although it appears to have been a "gentleman's agreement" rather than a regulation. This requirement did not apply to books which were published under royal privilege, but the members of the Company were bound to respect these privileges and not in any way infringe upon the rights which they conferred. The requirement of registration did not apply to the king's printers in so far as their patent for the royal printing extended; that is to say, the royal printer was not required to register statutes, law books, or other government printing, but he was required to register all general publications. This legislation requiring registration was not always strictly enforced.

The powers of the Company were used much more for the regulation and control of printing than for the

improvement of the art. It was to the Company that the government looked particularly for the enforcement of the statutes regarding printing. For that reason, if a book were of doubtful character and liable to be prohibited the publisher preferred to run the chance of attempting to evade the regulation regarding registration. Fortunately the registers of the Company containing the records of all their transactions are for the most part still in existence. They furnish an immense fund of valuable information extending over a very long period.

The Stationers' Company included the printers, bookbinders, type-founders, and booksellers. It had ninety-seven charter members. A few of the London printers are known not to have joined the Company when it was organized. Why they stood out we do not know. Very likely it was simply the usual assertion of British independence and impatience of control. The requirement of membership in the Company as a requisite to carrying on the business was not enforced with regard to those printers who were in business when the Company was chartered, its application being restricted to those who might thereafter desire to enter the business. Some of the independents afterwards joined the Company. The remainder stayed out permanently.

The organization of the Company was not in itself sufficient to secure the desired control of the industry. As has already been pointed out, an immense flood of printed matter was being brought out on account of the bitter religious and political controversies of the time. Most of it was very poor printing. The end desired was to get it out as quickly as possible and as cheaply as possible. Much of it was objectionable to

the government and the organization of the Company was immediately followed up by repressive legislation.

In 1558 Queen Elizabeth laid the foundation of legislation for the control of the press by issuing "injunctions" which required that every book should be licensed either by the Queen or by the members of the Privy Council, by the Archbishop of Canterbury, by the Chancellor of one of the two universities, or by other authorities specified in the act. Frequent proclamations and orders show that the injunctions were not obeyed. It may be laid down as a fundamental principle in the study of history that the frequent repetition of legislation on any one subject shows that the subject is considered very important by the government and that the legislation is not effective. So seriously was this matter regarded by the government that very extreme measures were adopted in dealing with offending printers. One William Carter, for instance, who had been several times punished for breach of the printing regulations, finally printed a seditious book, "a treatise of schisme," for which he was tried for high treason, condemned to death and hanged, disembowelled, and quartered according to the ghastly custom of that time.

By way of further tightening of the regulations a Star Chamber decree was issued in 1586 much more strict than any preceding order. By the provisions of this decree all presses then working had to be reported in the same way as already provided. No presses whatever were allowed outside of London, excepting one each at Oxford and Cambridge. Previous to the charter of the Company provincial presses had been started at Oxford, York, Cambridge, Abingdon, Tav-

istock, St. Albans, Bristol, Ipswich, Canterbury, and Norwich, in the order named. These, of course, were all swept away by this act excepting those of Oxford and Cambridge. No more presses were to be permitted until the number in use had been reduced to a number which should be pronounced sufficient for the needs of the kingdom by the Archbishop of Canterbury and the Bishop of London. Vacancies in the number of licensed printers were to be filled by three stationers (members of the Company) who would be nominated by the Company and licensed by an ecclesiastical commission. The censorship, both ecclesiastical and lay, was developed and enforced by further provisions of the act.

These are the conditions under which that great literature which is known as Elizabethan literature was created and published. It seems incredible that such literature could have been produced under such conditions. The fact that it was so produced seems to show that the censors made a conscientious attempt to enforce the legislation in such a way as to prevent the actual abuse of the printing press and to protect the government from danger arising from these sources, while leaving pure literature as free as the conditions permitted. Of course, we of to-day regard any system of press censorship as wrong and cannot approve any such legislation. It is worth while, however, to remember that these men made an earnest effort to live up to the moral and political standards of their own time.

In the execution of this edict the Stationers' Company made weekly official visits to every shop. These visitations were intended to ascertain:

1. How many presses each printer possessed.
2. What he printed.
3. How many impressions were taken of each piece of work.
4. How many workmen and apprentices there were in each plant.
5. Whether unauthorized persons were employed or allowed to remain about the plant.

The regulations of the edict and also the private regulations of the Company seem to have been enforced at this time with all the thoroughness in the power of the Company. The registers show that its officers frequently seized and destroyed editions of unlicensed books and in other ways enforced the edicts against all persons. Its own members were frequently disciplined. The registers show discipline for printing an unlicensed book, for selling a prayer book of Edward VI in place of one of Elizabeth, for infringing a copyright, for printing indecent or offensive matters, for selling books to other than book shops, for selling books "disorderly printed," for keeping open on Sundays and festival days, and for keeping unregistered apprentices. The phrase "disorderly printed" appears to refer to the careless and inaccurate printing of the books rather than to the nature of their contents. The printing standards of the time were not high, but this would appear to indicate a disposition to maintain them, such as they were. The punishment for selling to other than book shops is interesting as showing that at that early period the book trade suffered from one of the things which to-day causes much complaint among booksellers. Sales by department stores, drug stores, and other parties disposed to cut rates are regarded as

serious difficulties in the book trade of to-day and it is evident that the same difficulty occurred three hundred and fifty years ago.

The difficulties of the printers were by no means limited to those created by the edicts or regulations. One of the great sources of difficulty lay in the privileges and monopolies which had been recklessly granted for a considerable period. These privileges had a most unfortunate effect upon the industry both on the side of business and on that of craftsmanship. On the side of business they gave to certain printers a monopoly of practically all of the work which was certain to produce good financial returns, leaving to the unprivileged printers the doubtful enterprise of producing current literature. On the side of craftsmanship they took away the spur of competition. The greater part of the literature of this period was produced by unprivileged printers, most of it with very little profit to them. On the other hand, the privileged printer, being secured in his monopoly of a certain kind of production, was not held to any artistic standards. Competition being impossible, he could print as cheaply and as badly as he chose and generally did so. In both directions the effect was paralyzing.

Naturally the unprivileged printers were constantly tempted to infringe upon the monopoly rights of the others, with the result that there was constant friction and appeals to authority were taken on both sides. The matter finally came to a head in a serious revolt of the unprivileged printers under the leadership of one John Wolfe. Wolfe was a member of the Fishmongers' Company, but had undertaken to do printing and declared boldly that he proposed to lead a move-

ment which would revolutionize the entire situation. The revolt was sufficiently serious to bring about a compromise by which a considerable number of privileges were given up entirely or turned over to the Company to be re-distributed by them among the printers. The extent to which these privileges were granted may be seen by the fact that John Day, of whom we shall hear more presently, alone gave up fifty-three privileges, although he kept several of the most important and profitable ones. Wolfe transferred his membership from the Fishmongers' to the Stationers' Company. As a member of the Stationers' Company he obtained certain privileges for himself and it is interesting to note that not long afterward the registers of the Company show Wolfe appealing because somebody had infringed upon a privilege of his. Wolfe rose to become an officer of the Company and distinguished himself as a prosecutor of offending printers and a staunch upholder of law and order.

The natural result of the reduction of the number of offices under the edict of 1586 was that the trade was seriously overmanned and there were too many apprentices, as the reduction in the number of offices did not affect the number of either journeymen or apprentices. The Company dealt with the matter in a rather successful fashion by an order issued in 1587. This order limited the number of apprentices and attempted to make as much work as possible for the journeymen. It provided that no apprentice should be allowed to work in either the composing room or the press room if there were any competent journeymen in need of work. When we remember the small number of offices in London and the fact that there

were only two in England outside of London, we can readily see that this order was not so difficult of enforcement as might appear. No form was to be kept standing to the injury of workmen. The meaning of this is clearer when we remember that all composition at this time was hand composition and that stereotyping and other methods of preserving forms were not known and consequently a reprint or re-issue was, excepting for absence of editorial work, a new job. If there was expectation that a new reprint might soon be required and the printer had the type to spare he might leave a form standing and so avoid the labor of recomposition. This regulation meant that as soon as the first impression was taken the type must be distributed so that in case of reprinting the compositor would have a new job. For like reasons the number of copies to be printed was limited in ordinary cases to 1250 or 1500, so that if the book proved to be popular work might be provided in setting up repeated editions. These regulations seem to have been reasonably successful so far as the journeymen were concerned, but, of course, they materially increased the price of books.

The period of apprenticeship was from seven to eleven years. It was intended that apprenticeship should end at 24, and the length of the apprenticeship depended upon the age at which it was begun. At the end of the apprenticeship the indenture required that the master should make the apprentice free of the Company "if he have well and truly served." As the limit of membership of the Company was only about 25, for a long period only about one-half of the apprentices ever became masters; the rest of them remained permanently in the position of journeymen. As elsewhere

in Europe, the apprentice might become heir to the business and the place in the Company by marrying either the daughter or the widow of a master printer. Apparently the business went to the widow rather than to the daughter if the widow survived. Widows even seem to have taken the business in preference to sons. Consequently the widow of a master printer was a very desirable match for an ambitious apprentice in spite of any difference in age, and several instances are recorded where a business changed hands twice by successive re-marriages of the widow.

There was a strong tendency, which we shall discuss more at length later, for the bookseller to get control of the situation. Copyrights generally belonged to the booksellers. They purchased them from the authors and held them as against the printers. It must be remembered that an author could not obtain a copyright, as copyright was secured by registration in the Stationers' Company and this registration could be made only by a bookseller or a printer. Consequently the author was obliged to content himself with what the purchaser of his work was willing to give him. The bookseller naturally got his printing done as cheaply as he could and printers cut prices then just as they do now, and got poor as a result just as they do now.

CHAPTER III

JOHN DAY AND THE DARK AGES OF ENGLISH PRINTING

ONE name stands out among English printers of this period, that of John Day, who has been described as "one of the best and most enterprising of printers." Day was born in 1522 and began to print in 1546. His business career lasted for thirty-eight years. He died in 1584, at the age of 62. Day began his business life at a period when English printing was very poor. His first books were as bad as those of his contemporaries. They were printed from worn type, the presswork was bad, they were without pagination, and he did not even use a device such as was customary among printers at that time. His first important work was a Bible, printed in 1549. This Bible was illustrated by woodcuts which were very evidently second-hand, as they extended beyond the letter-press on the page. On the accession of Queen Mary I, in 1553, he went abroad, possibly for religious reasons, but probably not, as Day, like most printers of this particular time, found no difficulty in conforming himself to the religious views of the government. As a rule they accepted the peculiar position of Henry VIII which has already been described, printed Protestant books under Edward VI, Catholic books under Mary, and Protestant books under Elizabeth. They seem to have been quite content, in other words, to take what was brought them and to accept whatever government regulations might be in existence.

This attitude on the part of the printers reflects the general attitude of the English people at this time. There is very little doubt that the mass of the people were neither staunchly Catholic nor aggressively Protestant. While there were earnest and aggressive spirits in both parties, it seems quite clear that the vast majority of the people were ready to accept either Catholicism or Protestantism as a state church. England did not become aggressively Protestant until well into the reign of Elizabeth. Unfortunately for the interests of religion and of religious toleration, the church question became a political question, and when Spain and the other Catholic powers attempted to overthrow the government of England and make England dependent upon Spain, patriotism and Protestantism came to be regarded by the English as synonymous terms. Here, as elsewhere, the Reformation was a political more than a religious question.

Just when Day returned to England is not clear, but it was before the death of Queen Mary, as he was a charter member of the Stationers' Company, which was chartered in the last year of her reign, and published a book dated the same year. Evidently Day studied abroad. Very probably that was his purpose in travel, for we find that in 1559 his books began to show excellence and they improved in quality until we find him soon producing the best printing which had yet been done in England. From this time on his work was marked by accuracy, taste, and a high grade of excellence in both typography and presswork.

He was greatly encouraged and at times assisted by Matthew Parker, who was Archbishop of Canterbury from 1559 to 1575. Parker was by no means a great

man, but he was just the sort of man whom the autocratic Elizabeth wished to have for Archbishop of Canterbury. He was moderate in his views and easy-going in temperament, a scholar and collector of beautiful things and a patron of the arts and sciences. Parker not only encouraged and patronized Day but employed him to print on the private press which the Archbishop had set up at Lambeth. Day's best piece of work was an edition of Asser's "Life of Alfred the Great" which he printed for Parker in 1574.

Day published and printed the first edition of Foxe's "Book of Martyrs," a huge folio volume of 2008 pages. In 1578 Day published a book in Latin and Greek. The Greek was the best face yet seen in England and was equal to the work of Estienne. Other notable achievements of Day were the printing of the Psalter with musical notes, the cutting of Hebrew words in wood to be used in printing the life of Bishop Jewel, published in 1573, and the cutting of a font of Saxon type which appears to have been the first used in England. This font contained twenty-six capitals and twenty-seven lowercase letters. The capitals consisted of eighteen old roman letters and eight Saxon characters, two of which were diphthongs. The lowercase contained fifteen roman and twelve Saxon characters. Day also cut italic types to match roman, the first time this had been done. Day's work was mainly religious, although he published some of the first English plays and some other works of general literature.

As usual with men of great excellence, Day suffered much from the antagonism of jealous rivals, but this antagonism was not sufficient to deprive him of success. The excellence of his work was rewarded not

only by success in business but by the award of a large number of privileges which were sources of great profit. We have seen, however, that he relinquished a large number of these at the time of Wolfe's revolt. Those that he saved seem to have been by far the most profitable.

A few other printers of this period need mention for various reasons. The best work after that of Day was done by Vautrollier. Tottell, whose name is variously spelled in the records of the time, printed many things of great value to English literature. He was an enterprising printer of contemporary publications. Robert Darker, king's printer to James I, printed the statutes, proclamations, and editions of the Book of Common Prayer of that period and deserves to be remembered as the original printer of the so-called Authorized Version of the Bible, published in 1611. This English text, sometimes called the Authorized and sometimes called the King James Version, was the only text of the English Bible received among English-speaking people until the revision made in the latter part of the eighteenth century. It may be worth while to note that this version is not uncommonly erroneously referred to as the St. James Version. There is absolutely no justification for this common error. The book was authorized by King James and for that reason is known as the Authorized or King James Version. King James, however, was no saint. The authorization was simply a license or permission. Darker published the book as a commercial venture at his own expense. He used the same type and the same ornaments as those used in the Bishop's Bible, an English translation published in 1568.

John Norton, another one of the group of printers favored by James I, cut some of the best Greek types which have ever appeared in England. He was a worthy successor in this field of John Day. William and Isaac Jaggard printed the famous folio edition of Shakespeare's plays in 1623. Typographically it was a poor piece of work, but as a literary landmark it is of the utmost importance.

The standards of Day were not long maintained. There were a few good printers in the seventeenth century, but for the most part they were poor and the tendency was decidedly toward deterioration. Political and religious controversies broke out afresh in the reign of James I (1613-1625) and were continued with increasing bitterness until they finally broke into the storm of civil war which swept over England in the reign of Charles I. A natural result of these conditions was a tightening of the restrictions upon the press, which became more and more burdensome. The controversies called forth floods of literature, much of which had to be clandestinely printed. The restrictions, as we shall presently see, were almost unbearable and the market was greatly disturbed. The consequence was that English printing reached its low-water mark in the last half of the seventeenth century. The period which we are considering, however, shows one important invention which in its field was a distinct improvement. Copperplate engraving was introduced into England in 1540, but it was a long time before it came into general use. Later we find it used first for portraits, then for engraved title pages, some of which were of great beauty, and then for general purposes of illustration.

James I strengthened the Company of Stationers by withdrawing several valuable privileges from private persons and giving them to the Company. This action was probably taken with a view to making the Company more reliable as the agent for the enforcement of the press laws, which were not materially changed during James's reign. With the political and religious dissensions which followed the accession of Charles I in 1625 came renewed efforts to meet the rising tides of discussion and to dam up the flood of pamphlets, mostly badly printed, first by the more stringent enforcement of the old laws and then by the enactment of new ones. The Company's registers at this time show a long list of penalties, including fines, cropping of ears, imprisonment, and expulsion from the Company. It is only just to King Charles, however, to say that he did attempt to foster learning and encourage good printing, provided the learning were politically and religiously orthodox according to King Charles's standards and the printers were amenable to authority.

In this connection there is a rather interesting incident of an attempt by King Charles to set up a Greek press. In 1631 Barker and Lucas printed the so-called "Wicked Bible," which derived its name from an unfortunate typographical error, the omission of the word "not" in the seventh commandment. Barker and Lucas were fined for their carelessness £300, a very heavy fine, equal, if we make allowance for the difference in the purchasing power of money, to about \$12,000 to-day. In settlement of this fine they were commanded instead of paying the money into the treasury to purchase £300 worth of Greek type and

to print one Greek book a year at their own cost and risk, the Archbishop of Canterbury to fix the size of the edition. They gladly agreed to this, but owing to the political conditions which immediately followed very little came of it.

In 1637 a Star Chamber decree was issued which marks the high-water mark of governmental regulations in England. By this decree all books of every sort were to be licensed. Law books were to be licensed by the Lord Chief Justice and the Lord Chief Baron; books dealing with history by the Secretaries of State; books on heraldry by the Earl Marshal; books on any other subjects by the Archbishop of Canterbury, the Bishop of London, or the Chancellors or Vice-Chancellors of the two universities. Two copies of every book submitted for publication were to be handed to the licenser, one of which he was to keep for future reference. Catalogues of books imported into the country were to be sent to the Archbishop of Canterbury or to the Bishop of London, and no consignments of foreign books were to be opened until the representatives of one of these dignitaries and of the Stationers' Company were present.

It was further decreed that no merchant or bookseller should import from abroad any book printed in the English language. The main purpose of this enactment was probably to prevent evasion of the English press laws by the importation from abroad of books objectionable to the government. It was also, although this purpose was probably secondary, intended to protect England from foreign competition. The name of the printer, the author, and the publisher, and the place of publication and sale were to be placed

in every book. No person was permitted to erect a printing press or to let any premises for the purpose of carrying on printing without first giving notice to the Company, and no carpenter was permitted to make a press without similar notice.

The number of master printers was limited to twenty. Every master printer had to give a bond of £300 for good behavior. The Master and the Wardens of the Stationers' Company might have three presses each and three apprentices. No other printer could have more than two presses. A master printer on the livery (a member of the Company) might have two apprentices, others only one. The master printers were to give work to journeymen when requested to do so. This enactment was not made out of any tenderness for unemployed journeymen but for the reason that the unemployed journeyman was always tempted to pick up an occasional shilling by printing unlicensed or objectionable books. It was considered desirable to keep him employed where his work could be supervised. All reprints had to be licensed exactly the same as new publications. The Company was confirmed in its right of search. This meant not simply a right of supervision of printing offices, but the right to search any place where it might be suspected that printing was being carried on. One copy of every book had to be filed in the Bodleian Library at Oxford. Only four type-founders were permitted to carry on business. Books could be sold only by booksellers. The punishments imposed for infractions of these laws included destruction of stock, fines, imprisonment, and whipping at the cart's tail. The allowance of type-founders, small as it was, seemed to be ample, in spite of the

fact that English type-founders had now ceased to cut type. English type-founding had generally been poor up to this time and was to continue so for some time to come. What new type came into use in the English printing offices was mainly bought on the continent.

Up to this time a great deal of printing had been done on the continent for the English market. The works of the Fathers, the classics, and the greater part of the serious publications of the time, being printed mostly in Latin, were in the hands of the continental printers. With their facilities for the production and distribution of books they held the market so securely that English printers did not even attempt competition. In addition to that a great deal of printing in the English language for the English market continued to be done on the continent. As has already been indicated, a good deal of this was political and religious and could not safely be published in England. A considerable quantity of it, however, was work in general literature, which was done better than most English work and cheaper than English work of a corresponding quality. The act of 1637 shut off a great deal of this foreign printing, especially so much of it as was controversial.

Further legislation was enacted in order to develop English printing. For a long time printing was not an English industry. It will be remembered that although Caxton was English born most of the early printing was done by foreigners who came to England for that purpose, and for a long time there was a very large foreign element in the industry. In 1523 a law was passed that no alien engaged in the printing busi-

ness in England could take any but English-born apprentices. In 1529 an act was passed that no alien not already naturalized could set up any house or shop for the exercise of any handicraft in England. In 1534 it was further enacted that no books should be imported bound and ready for sale and that no unnaturalized alien could sell foreign printed books except at wholesale.

The decree of 1637 was fortunately not long-lived. The political ascendancy of Parliament soon began to be felt and in 1641 the Star Chamber was abolished. While the abolition of this court did not directly affect the decree of 1637, indirectly it made it practically void. For a short while Parliament permitted the decree to lapse and left the printers very much to themselves. This was not because Parliament was any more liberal than King Charles in its views on the subject of printing. It was only that while Parliament was strong enough to suffer the law to be evaded and so to give free rein to the scribbling propensities of its supporters, it was not yet strong enough to muzzle the writers on the other side. Parliament was also very busy with other concerns and for the time being was content to let the printers alone.

The result was an enormous flood of printing, most of it worse than ever. An examination of the publications of the time shows that everything that would go on a press was dug up and utilized. We find in use old type and blocks which had formed part of the stock of Wynkyn de Worde and Pynson. As soon, however, as Parliament got well seated in power it proceeded to deal with printers along the old lines. In 1643 it reenacted the decree of 1637 with the impor-

tant modification that the number of printers was not limited. In 1649 sixty printers in London and the two university towns gave the bonds for good conduct required by law as a requisite to carrying on the business. It will be remembered that the decree of 1637 limited the number in London to twenty, with one in each of the universities. This act called forth one of the noblest pieces of literature in the English language, Milton's "Areopagitica," or plea for unlicensed printing, in which Milton brings all the resources of his great learning and matchless literary skill to the defence of the freedom of the press. The plea, of course, fell on deaf ears for the time, but it remains one of the jewels of English literature. The Parliamentary government held the act as a weapon which could be used in case of need. It was strictly enforced with regard to political and religious books and newspapers. It seems to have been very little enforced outside these limits.

When Cromwell took the reins of power as Lord Protector of England he enforced the press laws very strictly. Cromwell was a masterful man and was not disposed to permit criticism of his person and government or discussion of matters of public policy upon which the government had decided. On the death of Cromwell there followed a period of political uncertainty during which the enforcement of the act was relaxed, only to be renewed at the accession of King Charles II in 1660.

Shortly after the accession of King Charles a group of the best printers unsuccessfully petitioned for the incorporation of a Company of Printers as distinguished from the Stationers. They alleged that the Company

of Stationers was controlled by the booksellers and that they cheapened printing and impoverished the printers, that the Company of Stationers was so large that only old men could attain to the dignity of masters or wardens, and that only once in ten or twelve years was it possible for a journeyman printer to become a master printer. They claimed that a new Company would free the printing industry from these shackles, that it would improve the quality of printing, and that it would secure for the government better supervision of the output of the press. This last was probably a bait to the hook. The petition was not granted, however, and things went on in the old fashion.

In 1662 a new act similar to the preceding ones was passed, containing only one important variation by which the privilege of having a printing press was extended to the city of York. This act was for a time very strictly enforced. The police power necessary to the enforcement of the act was taken away from the Stationers' Company and entrusted to Sir Roger Lestrangle, who was appointed censor of the press. He was given control of the printing office and power of search. With a few reserved exceptions the entire licensing of books was placed in his hands and he was given a monopoly of the publication of news. Sir Roger seems to have taken himself quite seriously and to have discharged his functions for some years with a considerable degree of efficiency. Many books, however, were published without licenses. Some were published clandestinely, while it is probable that Sir Roger was more concerned to exercise the powers of office for the suppression of political and religious controversy and for the protection of his monopoly

than for the control of pure literature. The act was reenacted in 1685 for a period of seven years. It was then reenacted for a period of one year and finally disappeared in 1694.

In spite of the wretched condition of printing at this period a few lights appear in the gloom. Thomas Roycroft did some very excellent printing. He achieved one of the most remarkable tasks which had yet been accomplished by an English printer in the publication of his famous Polyglot Bible. This Bible gave the text in Hebrew, Latin, Greek, Chaldean, Syriac, Arabic, Samaritan, Persian, and Ethiopic. Of course, these languages did not all appear in all parts of the Bible. The Greek, Latin, and Arabic texts appear throughout. The Hebrew and Chaldean appear in the Old Testament, the Ethiopic in the Psalms and New Testament only, and the Persian only in the New Testament. The types used came from four foundries, one of them being a face cut by John Day. The work was published in six great volumes, pages 16 x 10 inches. The text was so arranged that when the Bible was opened at any point each double page showed all the languages used for that particular passage. The first volume was published in September of 1654. The second appeared in 1655, the third in 1656, and the other three in 1657. Cromwell encouraged the work by ordering the admission of the paper duty free.

In 1688 the largest office in London was that of James Fletcher, who had five presses and employed thirteen journeymen and two apprentices. One of the printers of this period, John Barber, arrived at the distinction of Lord Mayor of London. He was a very popular Lord Mayor and he must have been very pros-

perous in business or he would not have acquired the means necessary to holding the position. He was in no way remarkable as a printer, however.

During this period there were four type-founders of importance—Joseph Moxon, the Andrews brothers, the Glover brothers, and Thomas James. The most famous of these was James Moxon. Primarily a man of science, he was distinguished as a mathematician and hydrographer. To these interests he added type-founding. Like Dürer in Germany and Geoffry Tory in France, he worked out a theory of type design in exact mathematical proportions, but like these and other attempts of the same sort it was not successful. While it is true that there must be proportion in type-faces, it is also true that a beautiful and legible type-face must have qualities other than a mere mathematical exactness. Moxon is known chiefly by his important work, "Mechanick Exercises." Part II of this book is an exhaustive study of printing and type-founding. So thorough was Moxon's study of these subjects and so accurate his presentation that the work is yet a standard authority on many fundamental points.

Joseph and Robert Andrews, although not very good workmen, made an extensive variety of type and found a good sale for it. They used the Moxon fonts, but added to them new roman and italic fonts, learned fonts, so called, Anglo-Saxon, and Irish. James and Thomas Glover cast two fonts of black letter from the matrices cut by Wynkyn de Worde and some foreign letters. They do not appear to have undertaken competition with Andrews and James in the ordinary forms of letter. Thomas James, who shared with the Andrews brothers a large portion of the business, used

two sets of matrices cut in Holland. Of course, these few type-founders hardly made a beginning of supplying the English printers with type. The greater part of the printing of this period was done from type imported from Holland. It was in order to compete with this imported type that James obtained possession of the two fonts of Dutch matrices which were the backbone of his type-foundry.

After the Restoration of 1660, we find the Oxford Press rapidly advancing to the commanding position in English printing which it came to occupy in later years and still holds. Oxford had been a centre of royal influence in the civil wars. King Charles I held court there for some time and the university was always staunchly loyal to the Stuarts. Naturally it enjoyed the sunshine of royal favor when the Stuarts came back in the person of Charles II.

In 1667 Dr. John Fell, Vice-Chancellor of the University and afterward Bishop of Oxford, gave the University a complete type-foundry with matrices of roman, italic, black-letter Saxon, and several Oriental tongues. Ten years later Francis Junius added to the equipment of the foundry a splendid collection of out-of-the-way types, including Runic, Gothic, Saxon, Icelandic, Danish, and Swedish, together with a considerable number of types of the more common sorts. This equipment of type for learned work and foreign language printing enabled the Oxford Press to take a position without a rival as a producer of learned literature. The presswork and composition done at Oxford were well maintained on the level of their type equipment, so that the Oxford University Press soon came to hold a unique position.

CHAPTER IV

THE EIGHTEENTH CENTURY: THE PERIOD OF TRANSITION

THE eighteenth century was a very important time in the history of English printing. It was the period of the changes and inventions which led over from the mediævalism of the seventeenth century to the modernism of the nineteenth. Three special changes took place: first, the invention of stereotyping; second, the rise of the modern publisher; and, third, the dawn of modern ideas in types and typography.

The story of the invention of stereotyping is the tale only too common in industry of the inventor who is ahead of his time, the selfish and thoughtless crowd who opposed him, the apparent failure of the enterprise, and final success for the idea when the inventor is no longer alive to enjoy his triumph. About 1720 it occurred to a Scotchman named Ged that it ought not to be difficult to cast type by the page. He hit upon the idea of making a plaster-of-paris mould of the type-set page and from it casting the plates. As usual in such cases, he needed a partner with capital and some technical knowledge. In 1727 he associated himself with an Edinburgh printer, who soon became alarmed at the apparent prospective cost and withdrew from the enterprise. Soon after this Ged got acquainted with a London stationer named William Fenner. Fenner in turn introduced him to Thomas James, the type-founder, and the three associated

themselves in partnership for the development of the new process. For some reason James proved treacherous. Apparently the investment which he was making should have served to keep him faithful. Whether he became alarmed by a fancied danger to his business or was frightened or bought off by the printers is not clear. At any rate, his coöperation was only half-hearted. Instead of furnishing Ged with the best of type from which to make his moulds he furnished him with very poor type and his workmen wilfully damaged the forms.

While this was going on Ged was appointed printer to the University of Cambridge, where he met with the same experiences at the hands of the printers. Under great difficulties and discouragements he succeeded in producing two prayer books which were printed from his plates, but the animosity of the printers was so violent that the authorities suppressed the books and destroyed the plates. The reason for this animosity is not far to seek. The journeymen had not yet recovered from the fear and danger caused by the old statutes which had limited the number of shops without limiting the number of journeymen, thus causing extensive lack of employment. It must be remembered also that the old customs were still in force which limited editions and prohibited keeping type standing. It looked to the printers as if the invention of a process which would fix type by pages and make possible indefinite reprints from one setting of type was a most serious threat to the industry. From the point of view of the knowledge and the conditions in the second quarter of the eighteenth century we shall have to admit that their fears were well founded. They could not

possibly foresee the enormous increase of printing which was to make the stereotype indispensable.

To complete the tale of his misfortune, Ged's partners, James and Fenner, now fell out between themselves. The partnership was broken up and Ged, discouraged and bankrupt, went back to Edinburgh. His discouragement was not permanent, however, and he made another attempt, but not a printer could be found in Edinburgh who would set type for him. Ged's son learned composition and set up a few books, working by night, which were printed at Newcastle. Ged died in 1749, apparently defeated. Later in the century, however, his work was taken up and made practical by Didot in France and his invention developed to great proportions.

The early printers were their own publishers and booksellers. Previous to the invention of typography the maker and seller of the book were not ordinarily the same person. It was only natural that in a short time the stationers, that is to say, the sellers of manuscript books and of writing materials, should sell printed books also. Both the printer and bookseller were interested in an attempt to cut out one profit. If the printer sold to the bookseller and the bookseller sold to the public, both must profit by the transaction. If the printer could sell directly to the public or the bookseller could print his own books, obviously the whole or the greater part of both of these profits might go to one man. In this competition, however, the bookseller had three advantages. One came from the fact that the carrying on of a printing plant was a business enterprise and the additional care of maintaining a selling organization for marketing books with the

public was more than most printers were equal to. The second was that the bookseller could buy a whole edition or contract for its publication. In this way while he reduced the printer's profits he also greatly reduced his risks. The third was that privilege and copyright attached themselves to manuscripts. If the bookseller bought the manuscript it could not be printed except by arrangement with him. When the bookseller became the owner of manuscripts, or became sufficiently confident of his power to market books to employ the printer to produce such books as he could use, he became a publisher in the modern sense of the word. He might either set up a printing establishment of his own or he might have his work done by contract by one or more outside printers.

The business methods of the old printers were very simple. We have seen how Schoeffer did the first piece of commercial printing when he struck off for distribution a list of the books which he had on sale. We have seen how Jenson and Aldus and the other early printers sold their books at their printing offices, advertised them by correspondence, and sent them to the Frankfort Fair and other similar places. The Plantin workshop, which is still maintained as the Plantin Museum in Antwerp, still shows the little salesroom which was part of the original business. Caxton, with his sound business sense and trained business habits, had a way of assuring or forecasting beforehand the sales of his books, thus anticipating to a considerable extent the methods of the modern publishers.

It soon became the habit of the printers to open shops apart from their printing offices for the sale of their productions. These salesrooms developed into

book-shops through carrying in stock the books of other printers. In the old-world cities trades had a habit of congregating in one place. If a man wanted to open a book-shop, instead of trying to find a good location where there were no other book-shops very near at hand, he tried to get a location as near as he could to all the other book-shops. In this way certain streets or quarters of the cities, and particularly of London, were given up to certain industries. The centre of the English book trade of the seventeenth century was the churchyard of the old St. Paul's Church. This was the smaller church which occupied the site where now stands the magnificent St. Paul's Cathedral built by the great architect Sir Christopher Wren after the fire of 1660.

A glimpse of the way in which the business was done may be obtained from the following description of John Day's book-shop: "He got framed a neat handsome shop. It was but little and low, a flat roof, and leaded [covered with sheets of lead] like a terrace, railed and posted, fit for men to stand upon in any triumph or show." Evidently thrifty John Day was not above turning an honest penny by renting the roof of his shop to those who desired to see the Lord Mayor's show or some other glittering procession. All processions of any importance passed St. Paul's. We are told that this shop cost £40 or £50, which would be equivalent, making allowance for the difference in the purchasing power of money, to from \$1200 to \$1600 to-day. We are told that £150,000 worth of books were burned at St. Paul's churchyard and in the crypt of the church in the fire of 1666. This represents no less than \$4,000,000 in our present money.

Advertising was done largely by means of the so-called "title post," a sort of primitive bulletin board. On a post in the shop were put up the titles of new books on sale, with perhaps a brief bit of description. Books were sold either bound, stitched, or in sheets. The bindings in favor were leather-covered boards, perhaps vellum with silk ties to counteract the tendency of vellum to warp, or velvet and other textiles, often ornamented with elaborate embroidery. The books which were sold bound, however, were ordinarily in the plainer styles of binding. The more wealthy and particular book buyers preferred to buy their books in sheets and to have them placed in bindings which were ornamented with their coats of arms or with other devices of a personal nature. The stitched books were at first sewed by being pierced through the sheets with a bodkin and tied with a string. In 1586 a limit was set to the size and thickness of books which might be sold in this form. Those beyond the limit must be sewed on a regular binder's machine and made ready for the cover to be put on. Sewed books were often covered with cloth or pasteboard to preserve them and keep them clean. This was substantially what is now known as binding in cases.

For a long time the relations between printers, book-sellers, and authors were confused and irregular. Up to the end of the seventeenth century there was nothing in the nature of copyright except registration with the Stationers' Company, but that registration was made by the owner of the manuscript, who was not necessarily the author. Originally these owners were generally the printers because the printers and publishers, as has just been pointed out, were

the same. Later, as the ascendancy of the booksellers increased, it was they who held the manuscripts. Sometimes due regard was paid to the rights of the author and sometimes not. This appears to have depended entirely upon the arrangements which author and publisher were able to make. In many cases the author got decidedly the worst of the bargain. The protection which the Company undertook to extend was limited to the holder of the copyright. The situation was further complicated by the survival of privileges or monopolies of various sorts.

Toward the end of the seventeenth century, with the passing away of the mediæval conditions which had previously prevailed, the Company's control of the situation broke down. When the printing acts finally went into disuse in 1594, as has already been described, nobody had any protection. Everything in the way of copyright was entirely abolished. This condition was soon felt to be intolerable and in 1709 an Act of Parliament provided a system of copyright and recognized the author's right to his work. By this act the owners of old books and unpublished manuscripts, whether they were the authors or not, had proprietary right in them for twenty-one years, beginning April 10, 1710. This part of the act, of course, was a temporary provision for existing conditions. New books were to be controlled by the author for fourteen years. If at the end of that time the author was still living his copyright might be renewed for fourteen years more. Within the limits during which the copyright was valid it could be transferred. Such transference did not act as an extension. The copyright was secured by registration with the Stationers' Company as before.

This was really a booksellers' act, as at that time they held nearly all of the copyrights and doubtless expected to be able to secure all the new ones of any value. That was what happened at first. The protection given to the authors by the new act greatly altered the terms upon which the booksellers or publishers could obtain the manuscripts. It was some years before the authors came to a full realization of their rights under the new law. When they did arrive at this knowledge authorship as a profession became possible. For a long time authors sold their manuscripts outright to the publishers. The royalty system, under which the author shares the profits of the work, was a later development.

From this time on new work was controlled by the authors and the use of their manuscripts could be obtained only by some sort of bargain. All old work not covered by copyrights existing in 1709, and after 1731 all work upon which copyrights had expired, might be freely printed by any one. From that time on the publication of such works became, as it is now, purely a manufacturing proposition. Whether or not such books shall be published and whether or not the publication is a commercial success depend entirely upon the soundness of the publisher's judgment and the accuracy with which he gauges the popular demand for standard literature at a given price.

The publication of new work depends upon a variety of circumstances. The publisher pays either in cash or in royalty, or both, according to the prospects of sale. In case of authors of reputation this prospect can be reasonably well gauged. In case of unknown authors the publisher must take a risk if he buys a

manuscript. In many cases the publisher will require a guarantee against loss on an edition of a certain size. He may require this guarantee because he has doubts about the success of the work or because it is a book of such limited circulation, although it may be of the most important character, that the publication will not be commercially profitable. Of course, if an author is determined to see himself in print and no publisher will take his work on any terms, he can hire a printer to make up an edition, can get it copyrighted, and can dispose of it in such way as he may find possible or desirable.

From this legislation really dates the differentiation of the trade. This was a matter of economic growth rather than of legislation. The author might print and publish and sell his work, the printer might publish and sell, the bookseller might print and publish, but in either case there was an added risk combined with a possibility of greater profit. Most persons are content with smaller profits, providing they can be released from risk. Under the system which now developed the publisher assumed the risk. In that way he became the patron of both author and printer.

The first of the modern type of publishers was Jacob Tonson, the elder, who began business in 1678. A consideration of the development of the publishing industry would take us too far afield and it will be touched upon only as it directly concerns the development of printing.

About 1720 a forward step was taken in the development of English printing by the entrance of William Caslon into the field of type-founding. Born in 1692, we know little of his early life. In 1706 we find him,

then twenty-four years old, carrying on a little business in London as an engraver of gun locks and a maker of binders' tools. Through this last he came in contact with printers, particularly John Walter and William Bowyer, the younger, two of the well-known London printers of that day. His connection with the printing trade, his artistic skill, and his training as an engraver led him to undertake the designing and cutting of type, in which he was encouraged by his printer friends. His type was immediately successful not only in England but on the continent, which had hitherto never looked to England for type. His type was very legible and had a certain air of distinction which made it much superior to any English type made at that time. His roman was regular, graceful, and well proportioned, a worthy successor of the types of Jenson and Aldus. His italic was almost as good as his roman. The influence of Caslon upon English and afterwards upon American type-cutting has been very great. Many of the types in most common use are either Caslon's letter or some modification of it. This book is printed in one of the Caslon types. For many years no English type-founder could compete with him successfully.

The principal types of distinction which were then in the field were three, that of Giambattista Bodoni, that produced by the Didot family, and that made in Holland. Bodoni type was characterized by long ascenders and descenders, over-long serifs, and protracted hair lines. This general style of letter was very common in Italy for a long time both in typography and in manuscript. In the last century the so-called Italian hand, a handwriting showing these characteristics, was for a long time very fashionable,

especially among ladies. The Didot type was characterized by sharp contrasts, the thick lines being very thick and the thin lines being razor-edged in their thinness. The Dutch type was rounded and regular with very little contrast between the thick and the thin lines. Caslon's type was a rather successful effort to retain the good qualities and avoid the defects of all three. Avoiding the exaggeration of Bodoni, it retained, though in modified form, the contrasts of Didot and preserved the regularity of the Dutch without its monotony and lack of contrast. Toward the end of the century poor paper, poor presswork, and poor ink led to an attempt to get clearness and legibility by thickening the type lines. The result was the introduction, about 1800, of a very ugly, fat-faced type which had wide use. Mrs. Caslon, a widow, who was then in charge of the Caslon foundry, attempted to meet these demands by thickening the lines of the Caslon type, producing a modified form which had considerable success for some time. The old Caslon was revived by Whittingham about 1845. The better paper, ink, and presswork of those days revealed anew the excellence of the Caslon type and since that time it has never lost favor.

An interesting figure of this period is Samuel Richardson (1689-1761). Richardson was a very good printer and did a considerable business, but was tempted into authorship and became one of the first of the modern English novelists. He wrote, printed, and published three novels which yet survive, "Pamela," "Clarissa Harlowe," and "Sir Charles Grandison." The new vein which these novels struck in English literature was immediately successful. The novels,

though very long and written in a style which to modern readers seems anything but lively, were not only widely successful themselves, but were immediately imitated, and the good old printer's modest efforts were the beginning of the flood of novels which is now poured out from the press. Because Richardson was a pioneer his novels are remembered and students of literature are set to read them, at least in part. It is doubtful, however, if anybody reads them to-day unless he has to. It is said that through the treachery of one of Richardson's journeymen a Dublin printer got out a pirated edition of "Sir Charles Grandison" and sold it in Dublin before Richardson got it bound and published in London. This was possible because the English copyright law did not then apply to Ireland.

An interesting glimpse of the trade at this period may be obtained through the pages of Woodfall's ledger from 1734 to 1747, which has been published. The student of these matters can find therein very interesting material for a study of comparative prices and the like. One entry shows that he charged for the printing of Pope's translation of the Iliad, demy paper, long primer and brevier, 2000 copies, 6 volumes, 68½ sheets, £143 and 17 shillings, equal to about \$1700 in American money.

Perhaps the most interesting and important printer in the eighteenth century in England was John Baskerville (1706-1775). Baskerville was of unknown and humble origin. At seventeen we find him a servant in the house of a clergyman at Birmingham. He was a good penman, however, and his employer soon set him to teach penmanship to the poor boys of the parish and afterwards got him a position as a teacher of penmanship

and bookkeeping in a school. Baskerville was not only interested in penmanship but also in the cutting of letters in stone. Unlike Caslon, this interest did not lead him directly to take up type-founding or printing as his life work. In 1736 a man by the name of John Taylor set himself up in business at Birmingham as a manufacturer of japanned ware. Baskerville became interested in Taylor's work and learned Taylor's trade secrets by following him about and whenever he went into a shop and made a purchase going in himself and buying the same things in the same quantities. In this way he learned the composition of the japanning mixture and shortly set up a business for himself. This was his main business and source of revenue throughout his life and was very prosperous. Baskerville did not imitate Taylor and was hardly his rival, but won success in making other and better things than those made by Taylor. Curiously enough, although Baskerville remained in this business for many years and was very successful, not a single piece of work survives which is known to be his. Meanwhile he did not lose his early interest in the correct formation of letters and he became actively interested in type-founding about 1750. By this time, however, his ideas had spread beyond the mere designing and founding of type.

He conceived the idea of better books than had yet been made in England. He considered the matter in its broadest possible aspects. He realized the fact that a book is the result of many operations. He believed that the making of the best books, such as he had in mind, meant the best possible paper, type, ink, machines, and workmanship. Beginning with the

type, he employed a skilful type-cutter to work from his designs and is said to have spent £600 or £800 (\$3000 or \$4000) before getting a font to suit him. He never attempted to cut many types. His roman differs from Caslon's, but is equal to it in legibility. It is beautifully clear, regular, and well proportioned. Perhaps a certain lack of character and a too mechanical perfection would be the general criticism which could be brought against it. His italic was the best which had as yet been seen in England.

Baskerville also cut a font of Greek type. This experiment has been regarded as unsuccessful and his Greek type has been somewhat criticised. It was unsuccessful, but not through the fault of the type itself. His type was excellent, but it differed considerably from that to which the scholars were then accustomed and the learned world did not care to adopt it. Minor changes in the formation of English letters are not important, providing the general form of the letter is retained. In languages using a different character, however, even slight modifications are liable to be confusing and scholarly conservatism naturally shrinks from changes of this sort. It is probable, moreover, that the universities and the few persons doing printing in Greek did not encourage the new character as it would have involved a considerable expenditure for new type. With the comparatively small use for Greek type one font would last for a very long time.

Excellent as Baskerville's types were, they were not generally adopted. The printers stuck to the work of Caslon and Jackson, partly from the fact shortly to be noted that Baskerville did not get on very well with the printers and publishers and partly because

of the expense. They preferred sticking to the standard fonts and buying sorts which could be easily procured when necessary to undergoing the expense of buying new fonts from the new founder. Although the admirers of Baskerville consider his type better than Caslon's, it was not enough better to drive it out of the market. Baskerville's type, moreover, was much criticised on its own account. It was claimed that owing to its proportions and owing to its sharp contrasts it was hard on the eyes. This criticism, however, was probably very largely the result of prejudice and dislike.

Benjamin Franklin was a friend of Baskerville and tells an amusing story about this kind of criticism. He says that some printers were at his lodging in London and complained vigorously of the objectionable character of Baskerville's type and of the eye strain and headache which it caused to its users. Franklin thereupon stepped into another room and came back in a moment with a sheet of Caslon's specimens from which he had removed the heading. He handed this sheet to the critics who had been berating Baskerville and praising Caslon and said that he could not help thinking that they were influenced somewhat by their prejudice and he wished that they would examine this sheet and see if they actually did experience the unpleasant results of which they had complained. Supposing the sheet to be Baskerville's type, they studied it with some care and unanimously declared that they found the same difficulties and experienced the same discomforts which they had always met with in reading Baskerville's type. Franklin refrained from pointing out the trap into which he had betrayed them,

but satisfied himself that their criticisms really were the result of prejudice.

Type-founding, however, was only a part of Baskerville's scheme. As has been said, he had conceived the idea of the perfect book, or at least a book nearer perfection than England had yet seen. It is one of the most interesting things about Baskerville that he did not arrive at his conceptions by a process of experimentation and production of mediocre work. He conceived his idea and elaborated it in his mind first and then undertook to realize it in a product. He was the artist who conceives rather than the craftsman who slowly elaborates. The designing and cutting of new fonts of type was only one step in that direction. He determined that he would attempt to produce the whole book himself and he therefore set up a printing office of his own. He selected the paper for his editions with the greatest care. It is not certain that he did not even go so far as to make the paper for some of them, but whether or not this is true he gave it great attention. He took equal care with his ink, using every precaution to secure the production of a bright, clear ink which should work well and be permanent. He also had a special press built. This did not involve any innovations in design, but was built with the greatest care so as to secure the best possible impression. In order to give smoothness and shine to his pages and prevent the type from pressing into the damp paper and making an impression on the reverse side of the sheet he devised what is known as the hot press method of finishing. As soon as the damp sheets came from the press they were placed between plates of hot metal and subjected to pressure. This gave the

paper a perfectly smooth, shiny surface. This was another of the points of criticism of Baskerville's work. Those who were familiar with the coarse paper and rough impressions in common use declared that the shine of the smooth paper hurt their eyes. Baskerville also gave great attention to the typographical design of his books. He used ample margins and developed a style of dignified simplicity, free from extraneous ornamentation and extremely reserved in the use of all forms of ornament.

As a result of this care Baskerville produced the best books which had yet been made in England. They were very expensive. No cost was spared in their production and there was no catering to the popular taste which would enable him to reduce unit costs by publishing large editions. Baskerville frankly printed for the few. He believed that there were lovers of good books and good literature who were ready to pay what might be necessary to obtain their favorite authors in a fitting dress. In this he was somewhat disappointed. The number of such persons was less numerous than he had supposed and it is probable that on the whole Baskerville lost rather than made money by his printing and type-founding enterprises. He printed about sixty-seven books, all of which were reprints of the classics or standard authors. Not a single new book came from his press, although these were the flourishing days of Samuel Johnson, Goldsmith, Pope, Gray, Burke, Chesterfield, Young, Akenside, and other famous writers. The booksellers would not support him. He was not willing to cheapen his work or to lower his prices to meet their wishes, nor would he consent to being, like so many printers, a mere servant of the publisher. He

felt that he had his artistic message to give to the world and he insisted upon giving it in his own way, making himself his own publisher as well as printer. Very likely his editions would have made a larger sale if he had had the support of the booksellers in putting them on the market, but this was denied him.

Disheartened and disgusted by the lack of appreciation and support, Baskerville tried to sell out his type-foundry, but was unsuccessful. He negotiated with several of the leading printers of the continent and with Franklin, but was not able to effect a sale. Twenty years after his death, however, his type was used in the famous Boydell Shakspeare. His type obtained partial recognition. His work has been called too artistic for his time. It is said that Baskerville was an artist, but the England of the eighteenth century was not artistic. Perhaps it might better be said that Baskerville's standard of perfection was higher than his time could appreciate and that he failed because there was not yet a sufficiently large public ready to spend considerable money for de luxe book making. Baskerville unquestionably possessed great taste and a very high degree of mechanical skill. One does not find in his work, however, the artist's spirit which manifests itself in the work of the old masters or their late nineteenth century followers. Baskerville's work, nevertheless, was not in vain. No man can ever do anything better than it has yet been done without contributing to the progress of true art, even though his productions are appreciated by but few people. Unquestionably Baskerville's work influenced the Whittinghams, who are the great figures in the world of printing in the early nineteenth century.

It is interesting to note, before passing to the consideration of the work of the Whittinghams, that several of the great English printing houses whose names are familiar to all readers of books run back far into the eighteenth century. The Rivington house was established in 1711, Eyre and Spottiswoode not much later, Longmans in 1724, John Murray in 1768, William Blackwood & Son in 1804, A. C. Black in 1815, to mention only a few of the more familiar. In many cases these firm names have been several times changed, but the firms have maintained continuous existence.

CHAPTER V

THE WHITTINGHAMS AND THE MODERN BOOK

CHARLES WHITTINGHAM, the elder, founder of the business which is now known as the Chiswick Press, was born in 1767. He began work as a printer in 1789 on a very small scale. His first work was small job work such as cards, letterheads, billheads, and the like. It was not until 1792 that he did any book work at all. His first job was part of an edition of Young's "Night Thoughts." It was not uncommon at this time for publishers to parcel out a book among a number of small printers, giving to each a certain number of signatures. Like his great predecessor Day, Whittingham started out doing printing as badly as anybody else. The work which he did on his first book order shows all the vices of the time.

Fortunately for the art, Whittingham was not content to remain a poor printer, although he must have been perfectly aware that he was such. He early made the acquaintance of William Caslon, from whom he bought type and from whom he not improbably received typographical suggestions. In 1798 he published a book of a sort much in vogue at that period, called "Pity's Gift." In choice of type, design of title page, and other regards this book shows a great improvement over the work of previous years. It was illustrated and was the beginning of the long series of illustrated books for which the house afterwards became famous. The illustrations, however, were poor in themselves and poorly printed. Here again Whit-

tingham began on a level with his contemporaries, but by study and labor raised himself far above that level.

In a few years Whittingham was recognized as the best printer in England and had built up a good and profitable business. He won this success in spite of the fact that he, even more than Baskerville, failed to get on with the publishers. The publishers wanted cheap printing and large profits. Whittingham refused to lower his standards to meet their desires and insisted on printing to suit himself and, as he believed, the public. Less ambitious than Baskerville, but equally conscientious, Whittingham published small books, well printed, which could be sold at a reasonable price, although not at the price of trash. He was right in his estimate of the public demand and, secure in public support, was able to defy the publishers. When they refused to give him their work he told them to keep it, and entirely disregarded their hostility. He carried the war into the enemies' country by refusing to be bound by certain trade customs. These customs were survivals of the old privileges and monopolies which kept certain books in certain hands. There was no foundation for these customs except their antiquity, and Whittingham proposed to publish certain books which from time immemorial had been held to be the property of others. Of course, the publishers called him a pirate, but he never infringed upon a real copyright and his conduct in the matter is entirely free from moral reproach.

Whittingham was an enterprising business man as well as desirous of artistic improvement. He bought the first Stanhope press which was sold to a printing

house, in 1800, and his house was among the first to adopt improved machinery and methods of all sorts. There is, however, one notable exception. Whittingham and his nephew and successor believed that it was not possible to do the best work on anything but a hand press, and no power presses were used in the Chiswick Press until 1860.

About the opening of the century a man by the name of Potts invented a process for making paper stock from old rope by removing the tar and dirt. Whittingham got possession of this process and opened a paper-stock factory. He did not, however, open a paper mill, but sold the stock to Fourdrinier, the great French paper maker. The paper-stock mill was at Chiswick, and Whittingham opened in 1811 a second printing office in the neighborhood, which he called the Chiswick Press. For a time he carried on the two printing offices, the paper-stock mill, a book-shop, several publishing ventures, and a business of some sort, it is not now known what, in Jersey. It was not many years, however, before he saw the danger of this extension and gradually disposed of the outside things, concentrating his interest in the Chiswick Press, which he preferred to continue rather than the London office.

During this period his work steadily continued to improve. He invented a secret process for giving permanent brilliancy to his ink. He gave the greatest attention to the design and lay-out of his books, proportion in the matter of margins and the like, and to presswork. This last was doubly important because of his determination to improve the process of illustration. Of course, the modern processes were not then in use. Black and white was done either from

wood blocks or steel and copper plates, and color work was done by the use of solid color on blocks. In order to secure better results in black and white, Whittingham invented the over-lay process. Some of his work in color was the best ever produced by the methods which were then known. An indication of the resources of the establishment may be gathered from the story of the production of his *British Poets*, sets of which may still be occasionally bought in old book-shops. The design for the series was planned in 1819. It was shortly announced that they were to be published on a given day in 1822. When the day came the whole set was published as announced. It consisted of one hundred royal 18mo volumes, illustrated. Five hundred sets were printed, making a total of 50,000 volumes.

Shortly after this the younger Charles Whittingham, nephew of the elder, appears upon the scene. He was his uncle's apprentice and became his partner in 1824. The partnership lasted for four years and was apparently not a very harmonious arrangement. The elder Whittingham, like many strong and successful men, was masterful and was not disposed to share either power or responsibility. The young man, although having no occasion to complain of any unfairness, felt that although nominally a partner he was really merely an employee. In 1828 he left the Chiswick Press and set up for himself in London. He continued in business there for ten years and then his uncle, who was now old and in failing health, called him back to take charge of the Chiswick Press. In spite of the fact that their partnership had not been satisfactory, the old man doubtless realized that his nephew was the only man in England who was competent to continue the business

which he had built up with so much toil and in which he took so much pride. From this time until the date of the death of the elder man the younger Whittingham was the moving spirit in the establishment. After the death of the elder Whittingham the plant was moved back to London without change of name.

Shortly after the younger Whittingham took over the management he became acquainted with William Pickering and formed an association with him which had momentous effects on English printing and publishing. Pickering had started an old-book business in 1821 and had made money. Although not a practical printer he was interested in books and he had very intelligent ideas as to what qualities made books good, considered as pieces of work. Pickering desired to publish fine editions of old writers and entered into an alliance with Whittingham to produce them. For twenty-five years these two men worked together doing the best book-making which England had yet seen. Comparatively little of it was new work. It was mainly the printing of fine editions of so-called standard literature. In 1844, dissatisfied with the types in current use, they induced Henry Caslon, who was then the head of the Caslon foundry, to revive the old William Caslon type, known technically as old-face roman, and this revival was the beginning of the permanent restoration of the Caslon types to favor.

Pickering and Whittingham together may be said to be the fathers of the modern book. Together they worked out many improvements. The excellent work in illustration which had been developed by the elder Whittingham was continued and improved. In 1840 they were doing color printing from wood blocks which

was the best ever done by that process in England, and later they began to produce ornamental books with initials, borders, head pieces, and the like, printed from wood blocks, but superior to anything which had been seen since the days of illuminated manuscripts. Pickering and Whittingham were in constant consultation. They spent their Sundays and much other time together. The completeness of their coöperation is shown by Whittingham's answer to the question which of the two had the greater influence on the other. He replied, "My dear sir, when you tell me which half of a pair of scissors is the more useful, I will answer your question."

Pickering died in 1854, bankrupt through indorsing notes for a friend. The death of Pickering was a great blow to Whittingham, but the bankruptcy did not in any way involve the Chiswick Press. Whittingham never took the same interest in the business afterward, although the house had become sufficiently strong to continue and maintain its standards. Whittingham was always actuated by the true craftsman's spirit. He was successful in his business, but he was more anxious for artistic than for financial success. There is not the slightest doubt that if he had been willing to do so he might have amassed a large fortune. Upon one occasion he was called in as an expert to figure the price which the government should offer for a very large contract. Instead of calling for bids the government had a price figured which it proposed to offer for the work. Whittingham figured a price which would be just to the government and at the same time offer a good margin of profit to the contractor. After he had completed his labors, he was offered the contract himself, but refused, stating as he did so

that he would rather print fine books than make money.

The history of English printing shows one more epoch-making figure. It is that of William Morris, poet, socialist, idealist, and craftsman. Morris is in many ways one of the most picturesque figures of the nineteenth century. Interested in many kinds of craftsmanship, he was particularly interested in printing and in 1891 he set up the Kelmscott Press in order to express his idea of what a book should be. Morris was above all things a man of the Middle Ages. Like the even more famous Ruskin, his spirit revolted from many of the characteristics of the nineteenth century. Whatever he did, thought, or said is influenced by this underlying spirit of mediævalism. In his books and his types we find exhibited the spirit and forms of the fifteenth century, but the vital thing is the spirit and not the form. Although deeply influenced by fifteenth century forms, Morris's work is not mere imitation. It is rather a reproduction of the old-time spirit. Morris said that in printing it was important to consider "the paper, the form of the type, the relative spacing of the letters, words, and lines, and lastly the position of the printed matter on the page." The harmony and completeness of the whole, a harmony extending beyond mechanism to the harmony of literary spirit and typographic form, was his fundamental idea. In working this out he adopted as a unit not the single page of type, as had been commonly the case, but the double page, on the ground that when the book is opened we have before our eyes not one page but two, and therefore the two together form a unit of book composition.

Morris designed three types, named from the books in which they were first employed. The first was the

Golden, from the Golden Legend, a heavy black roman letter with distinct gothic influence. The second was the Troy, from an edition of Caxton's Troy book, a modification of a Koburger gothic of the fifteenth century. The third was the Chaucer, so called from an edition of some of Chaucer's work, which was the Troy reduced in size and slightly modified in face. The initial letters were designed by Morris in imitation of a set used by Sweynheim and Pannartz.

Unfortunately Morris lived only five years after he began to print and his press did not survive him. During that period he published fifty-three books in sixty-five volumes, none of them in large editions. The influence of Morris, however, was very great. Although he was not extensively copied directly, he led in a marked revival of the spirit of the old craftsman and in a renewal of the old conception of the unity and harmony of the book as a whole. The Kelmscott Press was hardly closed when Charles Ricketts opened the Vale Press, which operated from 1896 to 1904. Ricketts had much of the spirit and many of the methods of Morris, but unlike Morris, who approached his type problem from the side of manuscript, Ricketts conceived his forms as cast in metal. Another continuer of Morris's work was the Dove Press, which was started in 1900.

Morris's influence extended beyond the Atlantic and shows itself in some of the best American printing, particularly that of Mr. Daniel Berkeley Updike of the Merrymount Press of Boston and Mr. Bruce Rogers of the Riverside Press of Cambridge.

The central feature in the history of printing of the last century has been the development of periodical

and commercial printing. Previous to the last hundred years the particular thing was the book, but book printing is now only a small part of the industry. A study of periodical and commercial printing would be extremely interesting, but it lies in the domain of typography rather than in that of the history of printing. With the brief consideration which we have made of the so-called revival of printing under Morris and his successors we may properly take leave of this branch of our subject.

SUPPLEMENTARY READING

- William Caxton. By Charles Knight. (Popular and in a few respects inaccurate, but excellent for its sketch of the life and conditions of Caxton's time.)
- Life and Typography of William Caxton. By William Blades. (The standard authority, but suited only for somewhat advanced students.)
- A Short History of English Printing. By Henry R. Plomer. (A fairly good general view of the subject.)
- The Cambridge History of English Literature. Vol. II, Chap. xiii; Vol. IV, Chap. xviii; Vol. VII, Chap. xv; Vol. XI, Chap. xiv. (This work is made up of monographs written by distinguished specialists. The chapters indicated contain a very good general view of the development of British printing and publishing and of the beginnings of journalism in England.)
- See files of the *Inland Printer* (Chicago) for excellent articles by Mr. Henry L. Bullen. These articles are notable for their valuable illustrations.

SUGGESTIONS TO STUDENTS AND INSTRUCTORS

The following questions, based on the contents of this pamphlet, are intended to serve (1) as a guide to the study of the text, (2) as an aid to the student in putting the information contained into definite statements without actually memorizing the text, (3) as a means of securing from the student a reproduction of the information in his own words.

A careful following of the questions by the reader will insure full acquaintance with every part of the text, avoiding the accidental omission of what might be of value. These primers are so condensed that nothing should be omitted.

In teaching from these books it is very important that these questions and such others as may occur to the teacher should be made the basis of frequent written work, and of final examinations.

The importance of written work cannot be overstated. It not only assures knowledge of material but the power to express that knowledge correctly and in good form.

If this written work can be submitted to the teacher in printed form it will be doubly useful.

QUESTIONS

1. What general conditions made England slow to take up printing?
2. What special conditions existed in England about the time of the invention of printing?
3. What is the truth about the story that the first English printed book was dated 1468?
4. Tell the story of Caxton's life up to his return to England.
5. Tell the story of the rest of his life.
6. How many books did he print, and of what sort?
7. What remarkable omissions are there in his work, and why?
8. What was his special field?
9. What sort of man was Caxton?
10. What can you say about Caxton's typography?

11. What other printers appeared in England during Caxton's life?
12. What was the great difference between Caxton and his successors?
13. Who was Caxton's successor in business, and what do you know about him?
14. Who was Pynson, and what did he do?
15. What do you know about Copeland; Berthelet; Grafton and Whitchurch?
16. Describe the condition of English printing up to 1550, and give the reason.
17. What change took place after 1525?
18. What books were imported, and why?
19. What was the situation in England all through the Middle Ages with regard to labor troubles?
20. What social change took place in the nineteenth century, and what was the result?
21. How did the English deal with the problem of the regulation of printing?
22. What can you say about English craft guilds?
23. What were the reasons for the organization of the Company of Stationers?
24. What was the form of organization of the Company?
25. What was the Star Chamber?
26. What were the powers and the duties of the Company?
27. What followed the organization of the Company?
28. Give the substance of the edict of 1586.
29. What did the Company do in the execution of this edict?
30. What difficulties, other than those caused by the edicts, troubled the printers?
31. Tell the story of John Wolfe.

32. What was the result of the reduction in the number of offices, and what was done about it?
33. Describe English printing apprenticeship at this period.
34. What were the relations between author, printer, and bookseller?
35. Tell the story of John Day.
36. Mention other printers of this time, and give some distinguishing fact about each.
37. What tendency appears in English printing after Day, and why?
38. How did printing fare under James I; under Charles I?
39. Give the substance of the edict of 1637.
40. What legislation was enacted to protect English printing?
41. What happened when Parliament got the upper hand, and why?
42. How did printing fare under Cromwell?
43. Tell the story of the attempt to incorporate the Company of Printers.
44. Sketch the course of government regulation from 1662 to 1694.
45. Tell about Roycroft and his work.
46. Tell about the four type-founders of this time.
47. Describe the rise to prominence of the Oxford Press.
48. What three special changes took place in the eighteenth century?
49. Tell the story of the invention of stereotyping.
50. Tell how the publishers became the principal power in the book business.
51. Give the substance of the copyright act of 1709.
52. What was the effect of this act on the author and on the manufacture of books?
53. Tell the story of William Caslon.

54. Tell the story of Samuel Richardson.
55. Tell the story of the life of Baskerville.
56. Tell about Baskerville as a type-founder.
57. Tell about Baskerville's press; his methods; the reason for his lack of success.
58. Was Baskerville's work a failure, and why?
59. Tell the story of Charles Whittingham, the elder.
60. Tell the story of Charles Whittingham, the younger.
61. Tell the story of Pickering and his alliance with Whittingham.
62. Tell the story of Morris and the Kelmscott Press.
63. Describe Morris's ideas and tell about his work.
64. What was the effect of Morris's work?
65. Name a few of the printers most influenced by him.

TYPOGRAPHIC TECHNICAL SERIES FOR APPRENTICES

THE following list of publications, comprising the **TYPOGRAPHIC TECHNICAL SERIES FOR APPRENTICES**, has been prepared under the supervision of the Committee on Education of the United Typothetae of America for use in trade classes, in course of printing instruction, and by individuals.

Each publication has been compiled by a competent author or group of authors, and carefully edited, the purpose being to provide the printers of the United States—employers, journeymen, and apprentices—with a comprehensive series of handy and inexpensive compendiums of reliable, up-to-date information upon the various branches and specialties of the printing craft, all arranged in orderly fashion for progressive study.

The publications of the series are of uniform size, 5 x 8 inches. Their general make-up, in typography, illustrations, etc., has been, as far as practicable, kept in harmony throughout. A brief synopsis of the particular contents and other chief features of each volume will be found under each title in the following list.

Each topic is treated in a concise manner, the aim being to embody in each publication as completely as possible all the rudimentary information and essential facts necessary to an understanding of the subject. Care has been taken to make all statements accurate and clear, with the purpose of bringing essential information within the understanding of beginners in the different fields of study. Wherever practicable, simple and well-defined drawings and illustrations have been used to assist in giving additional clearness to the text.

In order that the pamphlets may be of the greatest possible help for use in trade-school classes and for self-instruction, each title is accompanied by a list of Review Questions covering essential items of the subject matter. A short Glossary of technical terms belonging to the subject or department treated is also added to many of the books.

These are the Official Text-books of the United Typothetae of America.

Address all orders and inquiries to COMMITTEE ON EDUCATION,
UNITED TYPOTHETAE OF AMERICA, CHICAGO, ILLINOIS, U. S. A.

PART I—*Types, Tools, Machines, and Materials*

1. **Type: a Primer of Information** By A. A. Stewart
Relating to the mechanical features of printing types; their sizes, font schemes, etc., with a brief description of their manufacture. 44 pp.; illustrated; 74 review questions; glossary.
2. **Compositors' Tools and Materials** By A. A. Stewart
A primer of information about composing sticks, galleys, leads, brass rules, cutting and mitring machines, etc. 47 pp.; illustrated; 50 review questions; glossary.
3. **Type Cases, Composing Room Furniture** By A. A. Stewart
A primer of information about type cases, work stands, cabinets, case racks, galley racks, standing galleys, etc. 43 pp.; illustrated; 33 review questions; glossary.
4. **Imposing Tables and Lock-up Appliances** By A. A. Stewart
Describing the tools and materials used in locking up forms for the press, including some modern utilities for special purposes. 59 pp.; illustrated; 70 review questions; glossary.
5. **Proof Presses** By A. A. Stewart
A primer of information regarding the customary methods and machines for taking printers' proofs. 40 pp.; illustrated; 41 review questions; glossary.
6. **Platen Printing Presses** By Daniel Baker
A primer of information regarding the history and mechanical construction of platen printing presses, from the original hand press to the modern job press, to which is added a chapter on automatic presses of small size. 51 pp.; illustrated; 49 review questions; glossary.
7. **Cylinder Printing Presses** By Herbert L. Baker
Being a study of the mechanism and operation of the principal types of cylinder printing machines. 64 pp.; illustrated; 47 review questions; glossary.
8. **Mechanical Feeders and Folders** By William E. Spurrier
The history and operation of modern feeding and folding machines; with hints on their care and adjustments. Illustrated; review questions; glossary.
9. **Power for Machinery in Printing Houses** By Carl F. Scott
A treatise on the methods of applying power to printing presses and allied machinery with particular reference to electric drive. 53 pp.; illustrated; 69 review questions; glossary.
10. **Paper Cutting Machines** By Niel Gray, Jr.
A primer of information about paper and card trimmers, hand-lever cutters, power cutters, and other automatic machines for cutting paper, 70 pp.; illustrated; 115 review questions; glossary.
11. **Printers' Rollers** By A. A. Stewart
A primer of information about the composition, manufacture, and care of inking rollers. 46 pp.; illustrated; 61 review questions; glossary.
12. **Printing Inks** By Philip Ruxton
Their composition, properties and manufacture (reprinted by permission from Circular No. 53, United States Bureau of Standards); together with some helpful suggestions about the everyday use of printing inks by Philip Ruxton. 80 pp.; 100 review questions; glossary.

TYPOGRAPHIC TECHNICAL SERIES *for* APPRENTICES

PART I (continued)—*Paper and Printing Plates*

13. **How Paper is Made** . . . By William Bond Wheelwright
A primer of information about the materials and processes of manufacturing paper for printing and writing. 68 pp.; illustrated; 62 review questions; glossary.
14. **Relief Engravings** By Joseph P. Donovan
Brief history and non-technical description of modern methods of engraving; woodcut, zinc plate, halftone; kind of copy for reproduction; things to remember when ordering engravings. Illustrated; review questions; glossary.
15. **Electrotyping and Sterotyping**
By Harris B. Hatch and A. A. Stewart
A primer of information about the processes of electrotyping and stereotyping. 94 pp.; illustrated; 129 review questions; glossaries.

PART II—*Hand and Machine Composition*

16. **Typesetting** By A. A. Stewart
A handbook for beginners, giving information about justifying, spacing, correcting, and other matters relating to typesetting. Illustrated; review questions; glossary.
17. **Printers' Proofs** By A. A. Stewart
The methods by which they are made, marked, and corrected, with observations on proofreading. Illustrated; review questions; glossary.
18. **First Steps in Job Composition** . . . By Camille DeVéze
Suggestions for the apprentice compositor in setting his first jobs, especially about the important little things which go to make good display in typography. 63 pp.; examples; 55 review questions; glossary.
19. **General Job Composition**
How the job compositor handles business stationery, programs and miscellaneous work. Illustrated; review questions; glossary.
20. **Book Composition** By J. W. Bothwell
Chapters from DeVinne's "Modern Methods of Book Composition," revised and arranged for this series of text-books by J. W. Bothwell of The DeVinne Press, New York. Part I: Composition of pages. Part II: Imposition of pages. 229 pp.; illustrated; 525 review questions; glossary.
21. **Tabular Composition** By Robert Seaver
A study of the elementary forms of table composition, with examples of more difficult composition. 36 pp.; examples; 45 review questions.
22. **Applied Arithmetic** By E. E. Sheldon
Elementary arithmetic applied to problems of the printing trade, calculation of materials, paper weights and sizes, with standard tables and rules for computation, each subject amplified with examples and exercises. 159 pp.
23. **Typesetting and Composing Machines** A. W. Finlay, Editor
Section I—The Linotype By L. A. Hornstein
Section II—The Monotype By Joseph Hays
Section III—The Intertype By Henry W. Cozzens
Section IV—Other Typesetting and Typesetting Machines
By Frank H. Smith
A brief history of typesetting machines, with descriptions of their mechanical principles and operations. Illustrated; review questions; glossary.

PART III—*Imposition and Stonework*

24. **Locking Forms for the Job Press** . . . By Frank S. Henry
Things the apprentice should know about locking up small forms, and about general work on the stone. Illustrated; review questions; glossary.
25. **Preparing Forms for the Cylinder Press** By Frank S. Henry
Pamphlet and catalog imposition; margins; fold marks, etc. Methods of handling type forms and electrotype forms. Illustrated; review questions; glossary.

PART IV—*Presswork*

26. **Making Ready on Platen Presses** . . . By T. G. McGrew
The essential parts of a press and their functions; distinctive features of commonly used machines. Preparing the tympan, regulating the impression, underlaying and overlaying, setting gauges, and other details explained. Illustrated; review questions; glossary.
27. **Cylinder Presswork** By T. G. McGrew
Preparing the press; adjustment of bed and cylinder, form rollers, ink fountain, grippers and delivery systems. Underlaying and overlaying; modern overlay methods. Illustrated; review questions; glossary.
28. **Pressroom Hints and Helps** . . . By Charles L. Dunton
Describing some practical methods of pressroom work, with directions and useful information relating to a variety of printing-press problems. 87 pp.; 176 review questions.
29. **Reproductive Processes of the Graphic Arts** By A. W. Elson
A primer of information about the distinctive features of the relief, the intaglio, and the planographic processes of printing. 84 pp.; illustrated; 100 review questions; glossary.

PART V—*Pamphlet and Book Binding*

30. **Pamphlet Binding** By Bancroft L. Goodwin
A primer of information about the various operations employed in binding pamphlets and other work in the bindery. Illustrated; review questions; glossary.
31. **Book Binding** By John J. Pleger
Practical information about the usual operations in binding books; folding; gathering, collating, sewing, forwarding, finishing. Case making and cased-in books. Hand work and machine work. Job and blank-book binding. Illustrated; review questions; glossary.

PART VI—*Correct Literary Composition*

32. **Word Study and English Grammar** . . . By F. W. Hamilton
A primer of information about words, their relations, and their uses. 68 pp.; 84 review questions; glossary.
33. **Punctuation** By F. W. Hamilton
A primer of information about the marks of punctuation and their use, both grammatically and typographically. 56 pp.; 59 review questions; glossary.

TYPOGRAPHIC TECHNICAL SERIES *for* APPRENTICES

PART VI (continued)—*Correct Literary Composition*

34. **Capitals** By F. W. Hamilton
A primer of information about capitalization, with some practical typographic hints as to the use of capitals. 48 pp.; 92 review questions; glossary.
35. **Division of Words** By F. W. Hamilton
Rules for the division of words at the ends of lines, with remarks on spelling, syllabication and pronunciation. 42 pp.; 70 review questions.
36. **Compound Words** By F. W. Hamilton
A study of the principles of compounding, the components of compounds, and the use of the hyphen. 34 pp.; 62 review questions.
37. **Abbreviations and Signs** By F. W. Hamilton
A primer of information about abbreviations and signs, with classified lists of those in most common use. 58 pp.; 32 review questions.
38. **The Uses of Italic** By F. W. Hamilton
A primer of information about the history and uses of italic letters. 31 pp.; 37 review questions.
39. **Proofreading** By Arnold Levitas
The technical phases of the proofreader's work; reading, marking, revising, etc.; methods of handling proofs and copy. Illustrated by examples. 59 pp.; 69 review questions; glossary.
40. **Preparation of Printers' Copy** By F. W. Hamilton
Suggestions for authors, editors, and all who are engaged in preparing copy for the composing room. 36 pp.; 67 review questions.
41. **Printers' Manual of Style**
A reference compilation of approved rules, usages, and suggestions relating to uniformity in punctuation, capitalization, abbreviations, numerals, and kindred features of composition.
42. **The Printer's Dictionary** By A. A. Stewart
A handbook of definitions and miscellaneous information about various processes of printing, alphabetically arranged. Technical terms explained. Illustrated.

PART VII—*Design, Color, and Lettering*

43. **Applied Design for Printers** By Harry L. Gage
A handbook of the principles of arrangement, with brief comment on the periods of design which have most influenced printing. Treats of harmony, balance, proportion, and rhythm; motion; symmetry and variety; ornament, esthetic and symbolic. 37 illustrations; 46 review questions; glossary; bibliography.
44. **Elements of Typographic Design** By Harry L. Gage
Applications of the principles of decorative design. Building material of typography: paper, types, ink, decorations and illustrations. Handling of shapes. Design of complete book, treating each part. Design of commercial forms and single units. Illustrations; review questions. glossary; bibliography.

TYPOGRAPHIC TECHNICAL SERIES *for* APPRENTICES

PART VII (continued)—*Design, Color, and Lettering*

45. **Rudiments of Color in Printing** By Harry L. Gage
Use of color: for decoration of black and white, for broad poster effect, in combinations of two, three, or more printings with process engravings. Scientific nature of color, physical and chemical. Terms in which color may be discussed: hue, value, intensity. Diagrams in color, scales and combinations. Color theory of process engraving. Experiments with color. Illustrations in full color, and on various papers. Review questions; glossary; bibliography.
46. **Lettering in Typography** By Harry L. Gage
Printer's use of lettering: adaptability and decorative effect. Development of historic writing and lettering and its influence on type design. Classification of general forms in lettering. Application of design to lettering. Drawing for reproduction. Fully illustrated; review questions; glossary; bibliography.
47. **Typographic Design in Advertising** . . . By Harry L. Gage
The printer's function in advertising. Precepts upon which advertising is based. Printer's analysis of his copy. Emphasis, legibility, attention, color. Method of studying advertising typography. Illustrations; review questions; glossary; bibliography.
48. **Making Dummies and Layouts** By Harry L. Gage
A layout: the architectural plan. A dummy: the imitation of a proposed final effect. Use of dummy in sales work. Use of layout. Function of layout man. Binding schemes for dummies. Dummy envelopes. Illustrations; review questions; glossary; bibliography.

PART VIII—*History of Printing*

49. **Books Before Typography** By F. W. Hamilton
A primer of information about the invention of the alphabet and the history of bookmaking up to the invention of movable types. 62 pp.; illustrated; 64 review questions.
50. **The Invention of Typography** By F. W. Hamilton
A brief sketch of the invention of printing and how it came about. 64 pp.; 62 review questions.
51. **History of Printing—Part I** By F. W. Hamilton
A primer of information about the beginnings of printing, the development of the book, the development of printers' materials, and the work of the great pioneers. 63 pp.; 55 review questions.
52. **History of Printing—Part II** By F. W. Hamilton
A brief sketch of the economic conditions of the printing industry from 1450 to 1789, including government regulations, censorship, internal conditions and industrial relations. 94 pp.; 128 review questions.
53. **Printing in England** By F. W. Hamilton
A short history of printing in England from Caxton to the present time. 89 pp.; 65 review questions.
54. **Printing in America** By F. W. Hamilton
A brief sketch of the development of the newspaper, and some notes on publishers who have especially contributed to printing. 98 pp.; 84 review questions.
55. **Type and Presses in America** By F. W. Hamilton
A brief historical sketch of the development of type casting and press building in the United States. 52 pp.; 61 review questions.

PART IX—*Cost Finding and Accounting*

56. **Elements of Cost in Printing** . . . By Henry P. Porter
The Standard Cost-Finding Forms and their uses. What they should show. How to utilize the information they give. Review questions. Glossary.
57. **Use of a Cost System** . . . By Henry P. Porter
The Standard Cost-Finding Forms and their uses. What they should show. How to utilize the information they give. Review questions. Glossary.
58. **The Printer as a Merchant** . . . By Henry P. Porter
The selection and purchase of materials and supplies for printing. The relation of the cost of raw material and the selling price of the finished product. Review questions. Glossary.
59. **Fundamental Principles of Estimating** By Henry P. Porter
The estimator and his work; forms to use; general rules for estimating. Review questions. Glossary.
60. **Estimating and Selling** . . . By Henry P. Porter
An insight into the methods used in making estimates, and their relation to selling. Review questions. Glossary.
61. **Accounting for Printers** . . . By Henry P. Porter
A brief outline of an accounting system for printers; necessary books and accessory records. Review questions. Glossary.

PART X—*Miscellaneous*

62. **Health, Sanitation, and Safety** . . . By Henry P. Porter
Hygiene in the printing trade; a study of conditions old and new; practical suggestions for improvement; protective appliances and rules for safety.
63. **Topical Index** . . . By F. W. Hamilton
A book of reference covering the topics treated in the Typographic Technical Series, alphabetically arranged.
64. **Courses of Study** . . . By F. W. Hamilton
A guidebook for teachers, with outlines and suggestions for classroom and shop work.

ACKNOWLEDGMENT

THIS series of Typographic Text-books is the result of the splendid co-operation of a large number of firms and individuals engaged in the printing business and its allied industries in the United States of America.

The Committee on Education of the United Typothetae of America, under whose auspices the books have been prepared and published, acknowledges its indebtedness for the generous assistance rendered by the many authors, printers, and others identified with this work.

While due acknowledgment is made on the title and copyright pages of those contributing to each book, the Committee nevertheless felt that a group list of co-operating firms would be of interest.

The following list is not complete, as it includes only those who have co-operated in the production of a portion of the volumes, constituting the first printing. As soon as the entire list of books comprising the Typographic Technical Series has been completed (which the Committee hopes will be at an early date), the full list will be printed in each volume.

The Committee also desires to acknowledge its indebtedness to the many subscribers to this Series who have patiently awaited its publication.

COMMITTEE ON EDUCATION,
UNITED TYPOTHETAE OF AMERICA.

HENRY P. PORTER, *Chairman*,
E. LAWRENCE FELL,
A. M. GLOSSBRENNER,
J. CLYDE OSWALD,
TOBY RUBOVITS.

FREDERICK W. HAMILTON, *Education Director*.

CONTRIBUTORS

For Composition and Electrotypes

ISAAC H. BLANCHARD COMPANY, New York, N. Y.
S. H. BURBANK & Co., Philadelphia, Pa.
J. S. CUSHING & Co., Norwood, Mass.
THE DEVINNE PRESS, New York, N. Y.
R. R. DONNELLEY & SONS Co., Chicago, Ill.
GEO. H. ELLIS Co., Boston, Mass.
EVANS-WINTER-HEBB, Detroit, Mich.
FRANKLIN PRINTING COMPANY, Philadelphia, Pa.
F. H. GILSON COMPANY, Boston, Mass.
STEPHEN GREENE & Co., Philadelphia, Pa.
W. F. HALL PRINTING Co., Chicago, Ill.
J. B. LIPPINCOTT Co., Philadelphia, Pa.
McCALLA & Co. INC., Philadelphia, Pa.
THE PATTESON PRESS, New York, New York
THE PLIMPTON PRESS, Norwood, Mass.
POOLE BROS., Chicago, Ill.
EDWARD STERN & Co., Philadelphia, Pa.
THE STONE PRINTING & MFG. Co., Roanoke, Va.
C. D. TRAPHAGEN, Lincoln, Neb.
THE UNIVERSITY PRESS, Cambridge, Mass.

For Composition

BOSTON TYPOTHETAE SCHOOL OF PRINTING, Boston, Mass.
WILLIAM F. FELL Co., Philadelphia, Pa.
THE KALKHOFF COMPANY, New York, N. Y.
OXFORD-PRINT, Boston, Mass.
TOBY RUBOVITS, Chicago, Ill.

For Electrotypes

BLOMGREN BROTHERS Co., Chicago, Ill.
FLOWER STEEL ELECTROTYPING Co., New York, N. Y.
C. J. PETERS & SON Co., Boston, Mass.
ROYAL ELECTROTYPE Co., Philadelphia, Pa.
H. C. WHITCOMB & Co., Boston, Mass.

For Engravings

AMERICAN TYPE FOUNDERS Co., Boston, Mass.
C. B. COTTRELL & SONS Co., Westerly, R. I.
GOLDING MANUFACTURING Co., Franklin, Mass.
HARVARD UNIVERSITY, Cambridge, Mass.
INLAND PRINTER Co., Chicago, Ill.
LANSTON MONOTYPE MACHINE COMPANY, Philadelphia, Pa.
MERGENTHALER LINOTYPE COMPANY, New York, N. Y.
GEO. H. MORRILL Co., Norwood, Mass.
OSWALD PUBLISHING Co., New York, N. Y.
THE PRINTING ART, Cambridge, Mass.
B. D. RISING PAPER COMPANY, Housatonic, Mass.
THE VANDERCOOK PRESS, Chicago, Ill.

For Book Paper

AMERICAN WRITING PAPER Co., Holyoke, Mass.
WEST VIRGINIA PULP & PAPER Co., Mechanicville, N. Y.



**RETURN
TO →**

LIBRARY SCHOOL LIBRARY
2 South Hall

6.

LOAN PERIOD 1

2

3

4

5

6

ALL BOOKS MAY BE RECALLED AFTER 7 D

DUE AS STAMPED BELOW

DEC 19 1984

DEC 15 1987

MAY 23 1990

630
U.C. BERKELEY LIBRARIES



C027493780

